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THE AMERICAN REVIEW

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THE UNIVERSITY AND THE CITY

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THE HAZARDS OF NUCLEAR POWER

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A NOTE TO THE READER

The articles in our special section reflect the worldwide transformation of higher education in recent decades. The university is no longer, in most countries, a training ground for ruling elites. Responding to the needs of modernization and to egalitarian aspirations, it has welcomed new kinds of students, increasingly from lower classes and minority groups. Yet despite such changes in composition and function, the university has hardly changed in structure. Several of our contributors address themselves to the inescapable question raised by this institutional lag: How can the university today be made more useful and enriching to its new constituents?

In addition, the university is being asked to respond more directly to the urgent needs of society. But this legitimate demand may clash with another legitimate expectation of the university: that it be a center of disinterested (not uninterested) intellectual curiosity, free from political partisanship. The debate is not over the right of individual professors or students to take controversial stands but over the university's role as an institution in public controversy.

Nevertheless there seems to be general agreement that the times are ripe for a thorough reexamination of the structure and the practices of higher education. Our contributors raise many questions: about the size of universities, about the relative importance for the professor of research and teaching, about the adequacy of traditional curricula, about the conflict between liberal admissions policies and high academic standards, about student politics, about the conditions conducive to learning, about the academic profession. And lurking under all of these is the broader question: What is the purpose of a university education? Is it occupational, intellectual, moral, or social—or some subtle combination of these?

We offer the reflections and arguments of our contributors not as final answers, but as stimuli to a wider public discussion. If history is, as H. G. Wells put it, "a race between education and catastrophe," then the improvement of the university is not simply an academic matter, nor is it indefinitely postponable.

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The Changing University

FIVE CRISES OF THE WORLD'S UNIVERSITIES

By James A. Perkins



Despite their differences, the universities of the world share some crucial problems, writes a leading U.S. educator. In the following article, excerpted from *UNESCO Courier* and based on a paper presented at an international conference, he analyzes the impact on universities of mounting enrollments, rising costs, demands for "relevance," changed priorities, and a "new skepticism."

James A. Perkins was president of Cornell University in upstate New York from 1963 to 1969 and earlier taught political science at Princeton University. He now heads the International Council for Educational Development. He has served as a government consultant in the fields of education, disarmament and foreign aid, and when President John F. Kennedy was looking for capable individuals to fill important government posts, he is said to have cried out: "All I hear is the name Jim Perkins!" Dr. Perkins is the editor of two recent books: *Higher Education: From Autonomy to Systems* and *The University as an Organization*.

There is not just a single crisis of the university, there are several crises. Any one of them by itself would be enough to cause serious trouble. They are closely related to one another and their solution will probably require a major change in the organization, structure and mission of higher education around the world.

The first crisis is that of numbers. While experiences differ from country to country, on the average the number of students entering higher education has doubled in the decade from 1960 to 1970. Even this swollen number will at least double in the next decade. If there were no other problems, this astonishing growth would, by itself, result in almost intolerable strains on most institutions of higher education in most countries.

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The root causes of this increase are to be found in the requirements of modern technological society. The need for trained or even semi-trained manpower is unending. No country and no people have a chance of entering the modern world with only a small fraction of the population attaining the equivalent of a secondary school degree. And no country and no people can hope to provide the leadership necessary for a modern society if only a very small fraction acquire the equivalent of a college or university degree.

Most countries have democratized their secondary education. In many places, secondary education was the selective and narrow route through which entrance to college and university was determined. Admission to the university was really controlled by careful selection for secondary school. With the widening of admissions to secondary education, however, traditional policies of automatic entry into the university have led to enrollments that, in many cases, are overwhelming. Over 100,000 students are enrolled in the Universities of Paris and Mexico, and similar floodings of existing institutions are visible almost everywhere. Those countries that have tried to regulate this tide by turning aside large fractions of the new graduates from secondary school have run into social opposition, which has been matched by the resentment of students who are admitted only to find no places prepared for them.

The central fact about numbers is that while we have opened wide the gates to secondary education, higher education continues to be planned on the traditional bases of professional standards and high selectivity. It is this mismatch of numbers and of social doctrine that is at the core of the crisis of numbers. We are trying to pour the ocean into our glasses and we are getting wet.

Pressure on Public Funds

The second crisis of the universities is that of finance, which stems directly but not exclusively from the crisis of numbers. Because universities were not prepared for the doubling of student admissions during the decade of the 1960's, they are suddenly faced with large demands for funds, for which neither fiscal policy nor tax structures were adequately prepared. The result has been shortages of manpower and money in every part of the system.

The budgets of the universities have gone up not only to accommodate a double enrollment within a decade but also to deal with the improvidence that comes from continuing old patterns which are unnecessarily expensive. The shocking fact is that the productivity of higher education has not improved during this decade, the per capita cost of student education has increased, and the effect of these multiplying factors and soaring budgets has fallen largely on the public treasuries. As a result of these twin crises of numbers and costs, there is

Five Crises of the World's Universities

hardly a university in the world that is not in financial difficulty that runs all the way from serious to catastrophic.

The consequences are not difficult to discover. The first is an enormous increase in the use of public funds. Another is an increase in public surveillance of academic expenditures—which has in turn raised deep problems about the future autonomy of individual institutions and of the whole educational system.

For many countries, if not most, higher education has been supported almost exclusively by public funds as a matter of tradition. For them

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Human history becomes more and more a race between education
and catastrophe.

H. G. Wells
”

the development of new relationships between university and state will not be so difficult, but they are already experiencing the effects of the public demand that their governments exercise tighter control over academic expenditures.

For those countries where a large part of higher education has been privately financed, as in the case of the United States, Japan and India, an increased dependence on public funds creates a kind of academic trauma. To surrender independence because of financial need is rarely a graceful exercise.

Demand for “Relevance”

In the United States as well as other countries, it is the students who have focused attention on *the third crisis: the relevance of the university curriculum*. This problem can be roughly divided into two categories. First is the relevance of general subject matter: that is, a better balance of humanities, social sciences, and sciences than most universities have provided or are even now prepared to provide. A second problem is the applicability of the education received. An educational system may offer a balanced diet of the three large disciplinary areas, but still offer all of them at such an abstract level that students would find their needs not met.

Obviously the newer the country, the more pressing are the demands for applicable knowledge. But the problem of applied versus basic, or relevant versus traditional studies in the newer countries is not an easy one to resolve. Applied studies do not flourish very long unless they are attached, in fairly close proximity, to more abstract matters. Most scholars realize that to do this they must have contacts with scholars in the more technologically advanced countries. Univer-

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sities in developing countries need such contacts almost more than established universities, but if they try to tilt their interests too heavily toward the applied sciences they will cut themselves off from some of the most vigorous intellectual growth going on in other parts of the world.

One other point needs to be made about the matter of relevance. As the numbers of students have increased, larger and wider cross sections of our societies have been admitted to the universities, and many of today's students are first-generation entrants without any family tradition to prepare them for the rigor of their studies. Many are from minority deprived groups, and the immediate utility of their university experience has to be demonstrated not only to them, but to the families who can ill spare them. The result has been an insistence on the part of these new classes of students at the university that there be a clear demonstration that what they were being taught had a direct connection with their own and their families' needs and aspirations.

In the United States this has been most vividly witnessed by the demands of black students for courses that would help them improve the slums from which many had come. In Latin America, the Indian from Bolivia, Columbia and Peru is demanding an education that would

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Educated men are as much superior to uneducated men as the living are to the dead.

Aristotle

* * *

A learned blockhead is a greater blockhead than an ignorant one.

Benjamin Franklin

”

help rescue him and his family from grinding poverty. In less harsh tones, perhaps, this case is being stated with greater and greater emphasis by students coming from the industrial cities of England as well as the southern parts of Italy.

Even a casual observer will see the connection between numbers, costs and relevance. To provide education that is relevant to a variety of demands is a costly business, while higher costs require demonstrably higher relevance. And as the university meets these demands for relevance and offers differentiated programs, one can expect an increased interest in university attendance, which will feed the cycle of numbers, costs, and relevance.

This brings up one of the ironic features of the current scene—that these crises are in large part the result of the university's successful adaptation to the needs of its various publics. As the university succeeds, its problems increase rather than decrease.

Five Crises of the World's Universities

From Security to Justice

But even these three interrelated crises of costs, numbers and relevance do not, by themselves, determine the atmosphere in which the university is struggling to perform its mission today. There are deeper matters at work that have enormously complicated the business of university management—the crisis of the new priorities.

Somewhere in the beginning of the 1960's, at least in the more developed countries, the intellectual avant garde shifted its social priorities away from concern for affluence, full employment, and peace-keeping by military power, and toward more preoccupation with justice for the

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Universities are of course hostile to geniuses.

Ralph Waldo Emerson

”

international community. Not every country has felt this shift in priorities in either the same manner or the same degree. But that some glacial change began to take place during this past decade is hard to deny.

One feature of this shift was the adoption of the new priorities by the young. Much has been made of the generation gap, and while there has always been such a gap, something new has been added. As societies modernize, the individual becomes free of both restraints and duties imposed by tribe and family. Modern society requires mobility and encourages it. The young are sent to school while the adults are drawn into the whirlpool of professional life. Thus the young are left to create their own culture and their own societies.

This disjunction of the generations would have produced a whole variety of complicated social problems even if the pressing concerns for justice and peace had not been adopted by this new generation. But independence fueled by zeal, alienation fed by distrust, separatism exaggerated by fundamental differences, in philosophy—all have served to present the universities with problems that are not just complex, but explosive. They are explosive because the generations coming to the university saw their dissatisfactions, caused by numbers, costs and relevance, through the red glare of anger at the society of which the university was an increasingly important part.

In these circumstances it was inevitable that the university—while trying to deal with its internal priorities—would find the new social concerns of its students almost impossible to resolve. They might be resolved if the students were content to have the university function as a neutral forum in which these serious external problems could be debated.

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But having become so closely identified with the society that supported it, the university, clearly, was not only an instrument for investigation, but a target for opposition. This fourth crisis of the university stems from a schizophrenia not yet resolved—namely, whether the university is more valuable as a neutral arena for inquiry and debate, or more valuable as a lever for social reform.

When societies are divided, universities have had difficulty in establishing their neutrality, or at least maintaining it; when a society has a substantial consensus on its main priorities, university neutrality becomes the more possible. It is not surprising that the countries that have had the most difficulty with their universities have been those with the deepest divisions in their social philosophies and social programs. Most university systems are trying to plot a course between the two extremes of neutrality and social activism by maintaining the maximum of independence from society while also making concessions to the new concerns in admissions policy and curricular ventures.

The Attack on Rational Discourse

Behind even the crisis of university identity and mission there is another and deeper crisis that imperils the very idea of the university itself. *This fifth crisis is the new scepticism* that denies the possibility of objective, rational thought. The comfortable belief that reasoning man would increasingly comprehend his environment to the benefit of a better evolution of mankind is an idea that has less currency with each passing year. In its place has risen a mysticism and a belief that somewhere in the dark reaches of the mind, in the senses and sensations, in feeling rather than in thought, one is more likely to find truth than in an objective examination of the world around us.

All this has undermined one of the central notions upon which the university is based—that learning is cumulative and that the opportunity for rational discourse is its *raison d'être*. With these concepts under attack, the idea of the university itself is in question.

We have been inclined to think of the crisis of the university as being the crisis of governance. This may be so; but we will not understand the nature of the crisis of governance unless we realize it is compounded by five crises of numbers, costs, relevance, priorities and scepticism. No new organization chart will be adequate to embrace the considerations with which universities must now deal. Statemanship of the highest order, both in and out of the universities, will be necessary if they are to fulfill their historic mission in our new world.

FROM THE "COURSE" TO THE "INSTITUTE"

By Walter P. Metzger



In most universities, the individual "course" is still the basic format of academic teaching. Professor Metzger argues that there are better alternatives, among them the short-term "institute," which offers the possibility of sustained, connected and interdisciplinary study.

Professor of history at Columbia University in New York City, Walter P. Metzger has centered his attention on the virtues, vices and perplexities of the academic profession. He is the author of *Academic Freedom in the United States: Age of the University* and a major essay on "The History of Academic Tenure" in a volume entitled *Faculty Tenure*. He is currently completing a book tentatively called *The Organized Professors*, which is scheduled for publication in 1974.

Picked at random, an American institution of higher learning may, with varying probabilities, turn out to be financed by government or privately supported; small, medium-sized or gigantic; a two-year college, a four-year college or a multiplex university; a place for residents or commuters; a center devoted largely to teaching or to teaching-and-research. At first glance, it is exceedingly difficult to see what, amid this stunning variety, constitutes the common denominator, the shared experience that binds. But on closer look one unifying feature does emerge. Picked at random, an American institution of higher learning will, with a likelihood that approaches certainty, use the format of instruction called the *course*.

Like other "rational" institutions, American colleges and universities do not simply assemble professors and students; they also try to organize them, leaving as little as possible to improvisation and chance. To this end, they supply "facilities" — space-facilities in the form of acreages, edifices, offices; time-facilities in the form of calendars, schedules, leaves. By all odds, the most ubiquitous of these academic facilities is the course. The course is the principal metric unit for all who work on campuses — for the student who puts four or five courses together and creates a program, for the teacher who puts two or three together and assumes a "load," for the registrar who keeps an inventory of these accomplishments and translates them into standings and degrees. A measure of frequency and duration — "Economics 210, Monday,

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Wednesday, Friday, 2 to 3 p.m.”—the course is also the key determinant of use and occupancy: “Ricardo Hall, Room 606.” It represents, unlike such facilities as dormitories and sabbaticals, an exact conformation of time and space. The course names and packages human knowledge—“microeconomic analysis,” “welfare economics,” “public finance”; all other knowledge is consigned to the lesser legitimacy of the extracurriculum or to the self-instructed mind. The course stimulates a variety of transactions: professors “give” it, students “take” it and “pass” it, faculty committees approve or disapprove it, textbook publishers provision it, teachers on leave preserve it, keeping it bracketed and unspoiled until they return. Man conceives the course, but only an organization can effectuate it, for it must be given an institutional number, advertised in an official catalogue, and pieced into an official schedule, the intricacies of which no one mind can grasp.

Origins of the Course

No one has yet written the biography of the course or clarified its origins and early history. It is clear, however, that the course, in primitive form, was present at the founding of the medieval university, which gives it an age (if not an unbroken lineage) of seven and a half centuries at least. In the medieval European *studium generale*, this format of instruction appears to have served several distinctive purposes. First, it was an instrument of convenience. In an era when teaching and learning consisted mainly of lecturing and listening (with breaks for disputations at climactic moments), the division of the task into scheduled sessions lightened the physical demands on the speaker, while acceding to the limited attention-span of the audience. Second, and particularly in the magisterial university, the course buttressed the

““
Education is what you have left over after you have forgotten everything you learned.

Anonymous

””
power of the teaching guild. It required the authorization of the regent masters, who were much concerned to keep out interlopers; it offered a show-case to aspiring apprentices who sought to demonstrate their skills.

In the student-dominated universities of medieval and Renaissance Italy, the course seems to have performed an added function: to insure that professors earned their keep. At the University of Bologna, for example, the learned doctors were required to begin their lectures precisely when the bells rang for mass and to end them exactly when

the bells rang for tierce; to move through the texts expeditiously, so that each section would be reached by a certain date; to deal with difficult issues as they arose and not, by dawdling, to escape them—all under pain of substantial fines. To enforce the rules of the course, a committee of students was empowered to observe the conduct of professors and report irregularities to the rector. At Oxford and Paris, it was the faculties that strove to keep professors to a punctual standard and a proper pace.

Conflicting Rationales

Each academic setting seems to generate its own reasons for the course. The American colonial college, though founded on Cambridge and Oxford lines, did not entrench the great invention of the English college—the tutorial. Instead of this informal, dyadic mode, it established a meshwork of formal courses that covered the main hours of the teaching day. The reasons for this preference may easily be surmised. To schoolmasters convinced that study is work and life is earnest, and forced to drum these homilies into quite young boys, the course must have seemed a more useful implement. Its regular occurrences would train students to steady habits; its short and definite periods would abet rote learning and mnemonic drill; its capacity to be set in clusters, to be linked in sequential chains, would strengthen the traditional curriculum, which would seem more inevitable without breaks or gaps. In addition, the course was probably much cheaper.

In time, the schoolmasters and drill majors left the American college, to be replaced by scholars and inquirers; in time, American college students became older and (perhaps) grew up. Still, though the elective system came in, and the old disciplinarian style went out, the format of the course persevered and prospered. One reason was that, as the disciplinary rationale for the course declined, a new libertarian rationale for it developed. While professors were spokesmen for tradition, they could regard the course as a standard vehicle, something borrowed, as it were, from a common store. But when professors became agents of innovation, they tended more to regard the course as a personal vehicle, for which there existed no true copy and in which they acquired patent rights. The course thus acquired new defenses: it became a private property, an intellectual sanctuary, one of the professional person's vested rights.

So amply furnished with reasons, so hardy in the face of change, the course escaped being put to the artless question: "But does it *help* teaching and learning? Is it really a *facility*?" At least, this question had not been uppermost in many minds before the mid-1960's when Professor Joseph Tussman, a philosopher at the University of California in Berkeley, subjected the course convention to a penetrating critique. Tussman argued that the student served by many courses is likely to

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be disserved by all. In the first place, he buys with each fraction of this committed time an even smaller fraction (because it is distributed among a great many students) of the teacher's interest. "No teacher is in a position to be responsible for, or effectively concerned with, the student's total educational situation. The student presents himself in fragments, and not even the advising system can put him together again."

In the second place, the teacher, in competing with other teachers for the student's time, tends to pile on assignments and thus create a formless and ever-mounting backlog with which the student can cope only by craft. "To survive he must learn how not to do his work; he is forced into the adoption of the strategies of studentship; he learns to read too fast, to write and speak with mere plausibility. His educational

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The true university is a collection of books.

Thomas Carlyle
”

life, through no fault of his own, becomes a series of artificial crises."

To Tussman, these evils, for the most part, were beyond the power of the individual to correct. The teacher can "develop a coherent course, but a collection of coherent courses may simply be an incoherent collection." The student may try to weave his own artistic tapestry, but he soon finds that "to pursue one thread is to drop another," that loose ends cannot be escaped. The difficulty, Tussman concluded, lay not in the perversities of teachers and students, but in the failings of organization.

The "Integrated Program"

For Tussman, the answer to the course was *an integrated program*, a plan of study that would take up all of the student's time and that would—in the first two years—take up every student's time. A shift from the course to the program, Tussman believed, would remove the obstacles to sustained attention that the current scheme ordained. By collecting students in one place and brooking no dispersive interruptions, it would eliminate the senselessness of 15 visits to five different classrooms every week. By requiring collective teaching, it would put an end to the competitive excesses of proprietary teaching. By giving coherence to the curriculum, it would reduce the frenzy and the fraudulence with which students attack their work.

All this the integrated program was supposed to do; but it soon became clear that the program could not vanquish the course. A spiritual descendant of the Experimental College created at the University of

From the "Course" to the "Institute"

Wisconsin by Alexander Meiklejohn in the 1920's, the program devised by Tussman at Berkeley embodied many of the features of its forebear: a single, premeditated theme (the study of man through the study of a selected culture—e.g., Periclean Athens or Confucian China or post-revolutionary France); a physical and in some ways spiritual removal from the rest of the university; a dedicated and like-minded faculty, covenanted to do naught but teaching, at least for the length of a two-year tour.

Such a plan, set forth in an American university in the late 1960's, was not likely to take that world by storm. It would put an end to the *segmented* curriculum, but only by resurrecting the *prescribed* curriculum, for which there were no longer many faculty upholders and perhaps even fewer advocates in the student ranks. It would aim at integration, but would do so by limiting choices—the choice of teachers by students, the choice of subjects by teachers—those optional features of the university that contribute substantially to its strength. Finally, by demanding of the faculty a relatively long and separative commitment, it required a measure of devotion that was bound to be as exacting as it was rare. Against a reform so Spartan and yet so limited, the course could be counted on to prevail.

The "Institute" Alternative

But the program is not the only possible alternative to the course. Following the ideas advanced and practiced by Professor Alan Westin, a political scientist at Columbia University, I would offer, both as an answer to the course and as an improvement on the program, the multifarious, short-lived teaching *institute* (the term has a closer kinship to the transient summer "institutes" set up by the U.S. Office of Education than to the Princeton Institute for Advanced Study or any other fixed research establishment). Like the program, the institute would demand an exclusive lien on the student's time, in return for the dispensation of knowledge in large blocks. Unlike the program, however, the institute would be capable of multiple incarnations, each entity with its own agenda, and would serve a campus-wide constituency, each group according to its needs.

To imagine how such a scheme might work, let us suppose that, at University X or College Y, it was agreed that any group of three or more professors, subject to some mechanism of review and to certain rules of accountability, could band together in a teaching company, of limited life and liability, with an endowment consisting of its human capital and a "product" consisting of some inclusive theme. Each company would last only for a semester (after which, if it proved viable, its license might be renewed for an equal period); each student doing work of a proper grade would receive credit for the work of a full semester; each faculty member so engaged would be assumed to have discharged his

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teaching obligations for that term. In each semester, a good number of such companies would be formed, so that students in all classes (including graduate students where appropriate) and of varied interests and aspirations could be accommodated. The size of the student contingent would be determined by the attractiveness of the offering and by considerations of efficiency.

The institute could permit economies not only of scale but also of resources. Establishing a new institute would require adventurous human beings, but it would not require new venture capital, since the costs of administering it would be minimal and the resources it would take are already there. Replacing one institute by another would be part of the standard operating procedure, as would the repetition of an institute that had proved its worth. And this turning and sifting would go on at the very core of the institution where it could have a maximum effect on teaching and a minimal effect on size. The trick that the institute promises to perform is to spur academic experimentation without producing irreversible experiments.

Mixing Disciplines

An institute plan would stimulate, but it would not mandate, interdisciplinary teaching. For a theme like "ethnicity in American life," a sociologist, an anthropologist and a historian might confederate. But for a theme like "political power," all the teaching partners might very well be drawn from the single department of political science. An institute devoted to Hispanic culture might be staffed by the Department of Spanish; an institute devoted to the cross-cultural study of "frontiers" might contain an assortment of area specialists; an institute devoted to "migration and social mobility" might avail itself of the talents of many social disciplines: history, sociology, economics.

The question of what to teach would be partly determined by the range of competences available, which in turn would be strongly in-

“
When you turn on a light in the darkness you are always in danger
from mosquitoes.

Cardinal Leon-Joseph Suenens

”
fluenced by the size and complexity of the institution. In University X, which comprises a medical school, a law school and a school of journalism, along with a college and graduate school, it would be possible to ally the skills of professionals with the perspectives of the humanists and offer institutes (perhaps in the professional schools themselves) on

From the "Course" to the "Institute"

"the public policy of health care," "law and poverty," "the press and civil liberties." But College Y, centered on the arts and sciences and without professional graduate faculties, would still be capable of interesting admixtures: thus, "the social and economic effects of education," "the history and philosophy of equality." The object would be to draw on existing strengths and unlock collaborative powers. It would not be to disguise incapacities under fancy titles or enshrine interdisciplinary fads.

To imagine an academic landscape filled with institutes is to conceive of possibilities that the course arrangement now precludes. Doing only one thing at a time, teachers and students could luxuriate in an activity that was free from artificial starts-and-stoppages, safe from the killing effects of bells. They could make use of entire days, or evenings, or weekends: time would be available in all sorts of chunks. They could pause when the spirit moved them—say, to read a book that had come up in discussion, or to end a discussion that had lost its punch. They could concentrate on one set of intellectual concerns at a time.

In an institute devoted to "medieval society," calculus and geology would not intrude. But medieval art, medieval history, medieval philosophy would be admitted, and for a while, in deference to that richness, calculus and geology could wait. In the roominess of an institute, use could be made of all the familiar tools of teaching (lectures, seminars, tutorials), of all the familiar tools of learning (readings, term papers, field work) and some tools that are not familiar but might be employed when teaching is uncoerced by clocks (arrangements for work combined with study, panels of visitors and members formed at mutual convenience, and the use of film and other media).

This is to speak of time; but space, too, is made more flexible by the institute. The spatial counterpart of the course is a set of separate classrooms branching off from a corridor—one kind of enclosure to support another, and a hallway to speed the movement of the passing streams. The spatial analogue of the "program" is the *house*—a building with numbered floors, containing tenants held on a long-term lease. The spatial counterpart and analogue of the "institute" is the *suite*—a congeries of parlors, reading rooms and studios opening into one another to allow for easy circulation and diversified use in accord with need.

A Question of Academic Freedom

The institute encourages collective teaching; does it thereby imperil freedom and individuality? The question is important and should not be shirked. In replying to faculty colleagues who defended the course as the last bastion of their liberties, Tussman insisted that "the course taught by a single professor is not sanctified by the law of nature; it is not a mandate of the charter of academic freedom; it is not triumphantly vindicated by its fruits. It is simply a customary, archaic mode of

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academic organization." To my mind, this was a too-cavalier reply to a possibly overwrought objection. The professor forced against his will to share the lectern with his colleagues does not re-enact the last ordeal of Socrates; but he does have reason to believe that one of his margins of discretion has been erased. The lecturer who has learned to speak in fifty-minute spasms may not take refuge in the Constitutional guarantee of free speech when his time is abridged or lengthened; but he may seek protection in the wisdom of letting men do what they do best.

The institute, in arguing against an undue fearfulness, does not ignore these resilient fears. It *does* encourage team instruction—because teaching is a complex act that can benefit from complex interactions, because academics can see themselves more clearly when peers as well as students are their looking-glass, because team instruction can be fun. But it does *not* confiscate existing properties, and it does *not* outlaw the course. The misanthrope, the prima donna, the surpassing lecturer may continue to give courses. The student who tires of the institute, and the student who likes things as they are, may still choose the entrepreneurial practitioners over those who prefer to teach in groups. Private space-time pedagogy would still have a place; the question, to be decided by marked ballots, would be simply whether it would have a first or a second place.

Abolish Departments?

The notion that departments are retrograde and should be abolished receives no endorsement from the institute. It encourages teaching by groups, but it does not mandate teaching by non-specialists; it challenges the rationale and practical monopoly of the course, but it does not challenge the gate-keeping powers and other personnel controls of the departments. On the other hand, the institute is not a mere defender of the departmental way of life. It does feed on the assumption that the academic division of labor can isolate teachers too much from one another and force students to live their lives too much in shards. Though it is not inconsistent with a progression of offerings that would move students from simpler to more complex issues, it is implicitly critical of the current paraphernalia of phased instruction—"introductory" courses, "distribution" requirements, "major" and "minor" schemes. Consequently, it does oppose departmental conventions, even as it admits the value of departments and relies on the willingness of departments to furnish it with combative means.

Is the institute form appropriate for every subject? It seems particularly "right" for the teaching of a foreign language—the advantage of living fully in the milieu of another native tongue has been demonstrated time and again. It seems especially adaptable to the study of cultural change and of comparative history and of the ground-assumptions on which knowledge rests. (Here one thinks of Daniel Bell's sug-

From the "Course" to the "Institute"

gested alliance of philosophy, history, and social thought.)

But would it do as well in the physical sciences, in engineering, mathematics, or biology? It may be argued that the large foundations of fact required by these subjects can best be laid by systematic coursework, and that discourse along the borders of these sciences arises so frequently and so naturally that it does not have to be contrived. But it may also be argued that some science would be better taught if a chalk demonstration in the morning could be followed by a lab session in the afternoon and a conference on individual research that very evening; and that biologists talking to physicists in a classroom create a different and rarer communication than that which occurs across the research fence.

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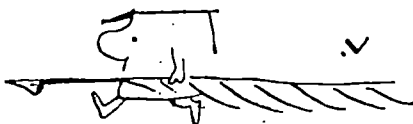
The baronial castles of the academic departments stand firm against thoroughgoing efforts to rethink the structure of knowledge.

John Hersey

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While it is true that we find no precedent for a panoply of institutes, covering an entire campus and conforming to a general design, we do find evidence of institutes springing up in the corners of colleges and universities, and in the fallow portions of their calendars; and we also find institute-like arrangements, usually in smaller colleges, rising up by plan. Of these phenomena, those that seem worthy of special mention are the institute run by the French Department and by Professor Alan Westin of the Political Science Department at Columbia; a variety of summer session institutes (like that just set up at Harvard to foster “quantitative history”); a number of “intersession” institutes (familiar to colleges that adhere to two four-month semesters with a one-month period sandwiched in between), several quasi-institutes or “intensive course” plans (like the one adopted at Colorado College and designed to let students study things *seriatim*, though not aimed at the structure of the course itself).

These ferments seem to indicate that the innovative spirit of the 1960's has by no means spent itself. The way to judge the institute is to try it out.



THE UNIVERSITY AND THE CITY

By Clark Kerr

From 1958 to 1967, Clark Kerr presided over the world's largest institution of higher education, the University of California, with nine campuses scattered around the state and an enrollment today of well over 100,000 students. Since 1967 Dr. Kerr has served as chairman of the Carnegie Commission on Higher Education, which has issued some 20 volumes — including one entitled *The Campus and the City* — analyzing university problems and offering suggestions for reform.

Dr. Kerr has also been a leading arbitrator in labor-management disputes and an advisor to four U.S. presidents. His books include *Labor and Management in Industrial Society* and a revised 1973 edition of *The Uses of the University*, in which he first coined the now familiar term "multiversity." He has served as an advisor on university problems in Asia, Africa, and Latin America.



The land-grant university movement is a little more than a hundred years old. A key purpose of that movement was to help agriculture and rural life throughout the United States. Today these land-grant institutions—including such notable state universities as those of Wisconsin, Minnesota, Indiana and Iowa—have risen to great heights of service to much of society. They presently number 67 out of some 2,600 colleges and universities in the nation, but they turn out one-third of all the Ph. D. degrees. In some fields the rate is much higher: 100 percent in agriculture, for example, and 50 percent in the biological sciences, 50 percent in engineering, and 50 percent in the health professions. Showing their heritage to this day, they turn out a far smaller proportion of advanced degrees in areas like philosophy and law, foreign languages and the other humanities.

The land-grant idea was one of the great ideas in the history of the United States and of higher education throughout the world. These institutions have contributed enormously to American agriculture and technology, helping to make both the most productive in the world. And they have made important contributions to their particular regions as well as to the nation. They accomplished this, to a large extent, by turning their backs on the then-established model of a college. To

the traditional classical curriculum, they added research on the problems of agriculture, and then extension services directly to the farm, to provide the individual farmer with reliable advice on seeds, farming methods, and new technology. Beyond the research and beyond the extension work, many of these land-grant institutions developed a remarkable spirit—a spirit of concern, of responsibility, and of service to the community.

Needed: A New Model

We need a new model to add to our existing models for universities in the United States. I have called this new model the “urban-grant university.” I have specifically not called it the “urban university.” The term “urban university” is used in some very strange ways. It is used for universities that receive some financial support from the city. It is also used for any university located in an urban setting, however uncomfortable that institution may be in its setting, however much it may wish it were located some place else, and however much its concern with the urban community may be limited to combatting the urban blight in its immediate neighborhood. Many institutions around the country called urban universities have turned their backs on their own cities.

I use the term “urban-grant,” instead, to indicate a type of university which would have an aggressive approach to the problems of the city, where the city itself and its problems would become the animating focus, as agriculture once was and to some extent still is of the land-grant university. Specifically, I propose that we create, to stand beside the 67 land-grant universities, some 67 urban-grant universities, at least one for each city with more than 250,000 people and several for the very large cities.

Serving the Cities

Increasingly, ours is an urban-oriented society, and the problems of the cities have become more acute in recent years. I believe that urban institutions of higher education have a vital role to play in reaching solutions to those problems. Many institutions want to do more in terms of developing an urban commitment but are handicapped by inadequate funding. The federal government could begin by establishing an urban-grant program to provide ten grants annually to carefully selected institutions to undertake such a commitment. For a broader urban-grant effort, the federal government might help make the land available as part of urban renewal.

Perhaps as new urban transportation systems are developed with federal support, some urban-grant universities could be located at the great central railroad and bus stations of such systems, rising above them and thus easily accessible to all the people in the surrounding

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community. Or the urban-grant university might be part of the educational park concept. Such parks, serving large areas of a city, have been proposed to meet problems of *de facto* racial segregation and to allow other improvements in our grammar schools and high schools. At the center of such an educational park there could be a university.

The suggestion that the federal government should help with the land and with the money to build these new campuses or to change existing campuses is altogether reasonable. When the land-grant movement began, over 50 percent of the people in the United States lived on the land; today, only 10 percent do. The reasons for an urban-grant university now are at least as compelling as were those for the land-grant university in 1862.

Federal aid to education has usually reflected the changing social problems of the nation. The land-grant movement, initiated by the federal government, was responsive to agrarian demands and to prob-

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One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can.

William Wordsworth

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lems of national economic expansion. During the depression of the 1930's, the National Youth Administration aided many students who otherwise could not have afforded to attend college. During World War II, in response to the nation's military needs, the federal government stepped in with support for scientific research. The government also provided free schooling to returning veterans, and thus launched the tremendous recent expansion of the American college and university system. With the space exploration program came the National Defense Education Act, intended to encourage specialization in science. And then, as people became more concerned with community health problems, tremendous sums of federal money were appropriated for the medical schools and for health research.

Today, great national problems have to do with the cities, with equality of opportunity, with the ending of poverty, and with the quality of life. The federal government might logically respond to these problems by again aiding the proper activities of higher education. The urban-grant university might parallel the land-grant institution not only with city-oriented curricula and on-campus research studies, but also by setting up experiment stations to work on the problems of the city, and by creating intensified urban extension services like those

for rural areas. As a counterpart to the county agent, a school agent could take the best new techniques for language teaching, for example, directly into the public schools in his city.

It should be noted, however, that there are also important differences between the land-grant and the proposed urban-grant universities. The enormous contributions made by the land-grant universities to agricultural productivity and to the quality of rural life were aided by major breakthroughs in the biological sciences, particularly in genetics. No similar breakthroughs have occurred in the area of the study of urban problems. The social sciences, in particular, are not now prepared to make the same contribution to the city that the biological sciences have made to the rural economy. Nor should the possible future achievements of the social sciences be oversold. Also, in the case of agriculture, the land-grant universities dealt with a few interest groups; the city involves many. And the land-grant universities were usually new institutions performing new functions; while there will be some new urban universities, the new services to the city will mostly come from older institutions slowly taking on new duties.

The city campus must find its way without any clear earlier models to follow. However, it can draw on a considerable amount of useful experience: in Chicago with neighborhood relations; in Boston with medical assistance; in California and New York City with open access, especially for minority groups; in St. Paul (Minnesota) and New York State with new types of institutional structures; in Cleveland with a new mechanism for planning and coordination; in Detroit with continuing education available at every stage of adult life.

Open Admissions

A problem faced by all institutions of higher education, but especially by those in or close to cities, is that access to college is not sufficiently broad. We have what Gunnar Myrdal calls an "underclass," and we are not drawing out from this underclass the widespread ability that is there. We have an enormous task of opening the doors to all and of bringing in those minority groups that have not yet been made full members of American society. That is a key responsibility for the urban-grant university.

The urban universities—and all of higher education—can do much more to provide equal access to all students. If major steps are taken, I believe that all remnants of inequality of opportunity due to race, sex, family income, age and geographical locations should be overcome substantially by 1980, and completely by the year 2000. I suggest the creation of open access places, with low or no tuition, within commuting distance of all high school graduates, particularly in metropolitan areas. We must promote universal access to post-secondary education—without establishing universal attendance. Not all young people

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want to go to college, and not all need to go. But there needs to be room for all those who want to enter higher education, and providing this opportunity should be a high priority for urban institutions.

Whenever a new college or university campus is established the number of people going on to a college or university from that area is increased, even though not all may attend the new local institution. The mere existence of a campus close by seems to raise the aspirations of the people surrounding it. Moving directly into the areas of deprivation, as the University of Illinois has done with its Chicago Circle campus, hopefully will bring new people into the colleges and universities.

Every effort should be made, of course, to draw in students from outside the immediate community as well, so that the urban-grant university does not become as segregated as its suburban or rural counterparts. The drawing power will depend in part on the general excellence of the institution. There also are many students today from all walks of life who are eager to participate in new approaches to our social problems, and who would find the urban-grant university an attractive and stimulating setting for their college work.

Involvement with Urban Problems

Beyond drawing in new groups and making their talents available more fully to the nation, the urban-grant university will find many city problems that need to be attacked more directly. In recent years there has been much talk but little effective action. In fact, some universities and colleges are less involved in municipal problems today than they were a third of a century ago. Rather than moving toward the problems of our cities, we have been moving away from them. There is an Association of Urban Universities which was organized back in 1914 and has 100 members, including Harvard. It is only recently, however, that Harvard has paid attention to the blight of sections of Cambridge or to urban problems more generally. Many of these universities have been *in* the urban setting, but they have not been *of* it.

“Universities are fit for nothing but to debauch the principles of young men, to poison their minds with romantic notions of knowledge and virtue.

Henry Fielding

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Since World War II, urban universities have been concerned with the new science, the new international order, the problems of organized labor and of business administration. But there has been little concern with the city ghetto, with equality of opportunity, with urban

blight. Little attention has been paid to inadequacies of the city school system at the primary and secondary levels. But these are precisely what the concerns of the urban-grant university should be. It should come in with its shirt sleeves rolled up.

The urban university should take some responsibility for the over-all school system of its city. Not only the urban-grant universities but universities generally ought to be looking back more to the high schools. There has been improvement in science and mathematics teaching at the secondary school level, for example, because of the interest of the universities. But, by and large, the universities have taken the students as they have come to them, and have not really tried to give full assistance to the high schools and their very difficult problems.

The universities could assist secondary schools in a number of ways, e.g., by helping to improve the quality of the curriculum and the text books, and by helping to identify people of high potential who, because of their home life or their cultural background, have not seriously considered the prospect of higher education. My experience in California was that the high schools were eager for more contact and assistance than the universities generally were willing to give to them. Of course, this has to be a two-way street. The high schools and the grammar schools can make valuable suggestions toward improving the university because university curricula and requirements have a great impact on the operation of the lower schools. The urban-grant university could help provide the framework for this interaction with the city's public school system.

A Broad Role

The urban-grant university also should take some responsibility for the health services of the area. I think that the medical school of the future, if it does its job properly, will be more involved with the health of the surrounding community than the land-grant university was ever involved with the economic welfare of farmers of its state. It will be concerned not just with its university hospital, but with the quality of other hospitals and the development of health centers.

The urban-grant university should be concerned with the urban environment in its totality: its architecture, its space use, its cultural programs and recreational facilities. The urban-oriented colleges and universities should consider the special educational needs of an urban population, and create programs to serve the residents of their areas. These colleges can make more effective use of the city's own educational resources, of museums, theaters and parks. Increasingly, colleges are recognizing that not all instruction must take place on campus. Many institutions could serve students more conveniently by dispersing some programs throughout the metropolitan area, holding classes in industrial plants, neighborhood schoolrooms, homes or offices in

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residential areas, in libraries and even in theaters.

Let me add emphatically, however, that the city should not be the sole concern of the urban-grant university. Certainly it should be a central one, but the urban-grant university should from the first plan to follow the land-grant model in its concerns for all the mainstreams of intellectual thought and discovery.

There are a few existing colleges and universities in the United States today that approach in some respects the urban-grant institution I have sketched, but I know of none which could be held up as a full model. The land-grant university turned away from the model of the classical university and eventually had a profound impact on

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A university should be a place of light, of liberty, and of learning.

Benjamin Disraeli
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that type of university, so that the Harvard of today is more a land-grant institution—without the land—than the classical university it once was. The urban-grant university can enter the American scene as a new model, eventually affecting all the others. And some universities will rise to heights of distinction on the urban-grant model, as have many on the land-grant approach.

The Question of Quality

This new type of university will inevitably find itself embroiled in controversy. There will be a controversy within it over the question of quality. A former president of a land-grant university in the Midwest once said that the state universities hold that there is no intellectual service too undignified for them to perform. I disagree with that. But I also disagree with the idea that because something is a city problem, it is not worthy of high-quality attention. I have seen faculty members who would work on an international problem, or on a national problem, or on the problems of local government in some other country, but not on the problems of their own city, because they regard such work as somehow beneath them. Granted, work can be done at a low level; so can work on national and international problems. But that need not be, in either case. Local city problems today need and justify work of the very highest quality.

Nor should the student body be expected to be of lower quality, even though it might be desirable to adjust admission standards somewhat to help make the urban-grant university more accessible to minority group students whose earlier educational experience may not have been completely adequate. I have a sense that faculty members

across the country increasingly want to make a contribution to solving the problems of these students. They certainly do not intend to lower the quality of the final product that comes out of the college. Rather, by greater attention and greater sympathy, they intend to help make up for the background deficiencies of the new groups of students.

Areas of Controversy

These new endeavors will inevitably produce some battles among three groups: those who want to remain secluded and aloof from immediate problems; those who want to work steadily and pragmatically toward the solution of those problems; and those who believe the problems can be solved only by changing the entire system. The land-grant institutions did not face so great an internal dispute about their role. They did not deal with a heterogeneous, often divided constituency. They were concerned primarily with problems of agricultural production, not with highly sensitive and complicated human relations.

Beyond the internal conflicts, this kind of university will be bound to face a great deal of external conflict about what it is doing. There will be those outside the university, for example, who will view with apprehension a potential political alliance of students and ghetto-dwellers. Others will fear the potential involvement of the university in partisan urban politics. The already existing urban institutions, though for the most part not doing the job of the urban-grant university as I visualize it, will nevertheless view any new institution or new activity as a competitor.

The land-grant institution in its early years also encountered some external opposition, but not really very much. There were occasional disputes, for example, over findings about the relative merits of oleo-margarine and butter, with the dairy industry naturally urging the superiority of butter. And there are always some objections from concerned parties when a faculty member says, for example, that farm wages ought to be higher. But the early land-grant institution faced essentially in one direction, toward the farmers, and served them, and naturally found little criticism there—except that there be more service and that it be more practical.

The urban-grant university, on the other hand, will have to face in many directions. When you deal with urban problems, you deal with complex controversies and with highly intricate urban politics. For this university to work effectively, there will have to be considerable public understanding—especially understanding of the distinction between service based on applications of knowledge versus positions taken because of partisan politics. Beyond that, the institution will need an excellent system of buffers between itself and political pressure. This is particularly a challenge to the trustees, who should be selected on a non-political basis, and who should appreciate that

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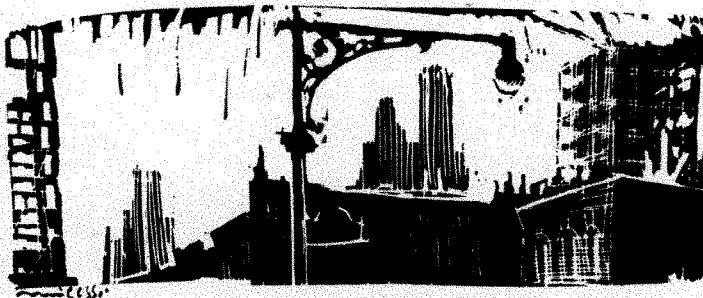
their job is to protect the institution, rather than to intensify the pressures from the external community.

Bridging the Gulf

This is particularly important because there are strong indications today of a widening gulf between our universities, whatever their setting and orientations, and the general public. Some people view the universities as elitist institutions apart from the everyday problems of the community. Many resent the criticisms of society that originate on university campuses. Others see the universities as sources of new ideas that are changing people's lives in ways they fear or don't understand or approve.

What we need is more contact, not less, between the people and the universities. We must bridge the gulf between the intellectual community and the surrounding society because, if that gulf is permitted to widen, the intellectual community will not get the resources and support needed to make it effective, and the people will not be served by intellect. The urban-grant university can provide such a bridge. If greater participation results in greater controversy, that is a danger we must be prepared to accept and to deal with.

We should consider the urban-grant university as a positive approach to some of the greatest of our national problems. During World War II we turned to our universities for a vital contribution to national survival. Cannot the intellectual resources that created the new age of science now tackle the equally explosive problems of our cities? The threat is as real and the obligation surely as great. Improving higher education in urban areas, and improving the ability of higher education to serve urban needs, are tasks that must be accomplished in a very short time. The university can do a great deal to aid the renovation of our cities. And in return, the university can be inspired and strengthened by such an involvement.



STUDENT POLITICS AND AFTER

By Seymour Martin Lipset
and Everett Carl Ladd, Jr.



Seymour Martin Lipset

Everett Carl Ladd



What happens to the political views of student activists after they leave the university? Do age, jobs and families inevitably moderate their opinions? Or are their outlooks largely determined by the early political experiences of their generation? In the following article, excerpted from *The Public Interest*, two social scientists test these two theories against the available data.

Professor Lipset of Harvard University is one of the most influential sociologists in the United States, and a frequent contributor to *Dialogue*. His many books include *Political Man*, *The First New Nation*, and *Rebellion in the University*. Professor Ladd teaches political science and heads the Social Science Data Center at the University of Connecticut. He is the author of *American Political Parties* and *Ideology in America*. Both authors have collaborated on a monograph entitled "Professors, Unions and American Higher Education," in preparation for a larger work on *The Politics of Academia*, scheduled for publication in 1974.

The upsurge of student activism and the radicalization of large segments of the undergraduate population since 1964 lead one to speculate about the future politics of today's students. It is clear from opinion surveys that the most recent students and graduates are more liberal and radical than those of the 1950's. The large majority identify themselves as left-of-center liberals, opposed to the Vietnam War, favoring egalitarianism and special help for black and other underprivileged minorities. The proportion describing themselves as "radicals" rose from 3 percent in 1965 to the high point of 11 percent in a Harris Poll in May 1970; it declined to between 4 and 7 percent in Gallup and Harris surveys during the "ebbing wave" of 1970-71, which has continued into 1973. Yet in response to a Gallup Poll in late 1970, 44 percent of college students described themselves as "far left" or "left" politically as against 17 percent who called themselves "right" and "far right."

* by National Affairs, Inc.

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As the students of this college "generation" have graduated and entered the junior ranks of the professions, the media, business, government, of academe itself, it would appear that they have brought to these occupational environments a deep concern for egalitarian, populist, and often strongly radical principles. Young journalists press for advocacy rather than "objective" reporting; new physicians support socialized medicine; architects demand plans which "serve the people"; young academics want "relevance," i.e., radical social positions, in their teaching and research.

What does the emergence of a liberalized, partially radicalized college stratum portend for the future? Will they remain a force for major social change as they climb the occupational hierarchies? Will they become much more conservative and "socially responsible" as they marry, have children, and gain status, power and personal responsibilities? Does the old saying, "radical at twenty, conservative at forty," prove valid, or will *this* generation retain its beliefs?

Politics and Age

These questions are not new, but unfortunately the existing social science literature does not provide an unambiguous guide. The basic confusion lies in the contrasting emphases upon the experiences of political generations on the one hand, and upon the effects of aging on the other.

Analysis in terms of political generations came to the fore in the 1930's in the work of Karl Mannheim and other social scientists. They contended that individuals gain a frame of reference from the decisive events of the period when they first come to political consciousness. More broadly, this means that the prevailing climate in which a generation "comes of age politically" tends to frame its later political orientation. Thus political analysts have stressed the impact of the Great Depression in creating an American generation disposed to fear economic insecurity and to favor welfare state measures, while those who came of age in the prosperous 1940's and 1950's have been said to be more cautious in their acceptance of the welfare state and less committed to New Deal liberalism. Similarly, the support for activist-interventionist foreign policy in the early 1960's has been credited, in part, to the reactions of a prewar generation which had learned the "lessons of Munich" and of World War II: that democratic powers must support small, weak states against totalitarian aggression.

Of course, those who speak of generations do not suggest that all or most people in the same age category react identically to key political events. Mannheim wrote of "generation-units," different groups within the same age stratum who adhere to alternative, often conflicting values. And more recently Bennett Berger noted that "it is essential, when

using the concept of the generation in a cultural sense, to specify generations of what, because it is only in a demographic sense that people in the same age-group constitute a homogeneous unit....” Obviously, the rich and the poor youth, factory workers and college students, blacks and whites do not experience events in the same way. But the general point holds that, whatever the specific generational unit, the early political values presumably persist through the years.

Moving Toward the Center

The argument about the effects of aging has led to quite different conclusions. For both social and psychological reasons, it has been claimed, individuals as they grow older tend to move from the political extremes to a more “moderate” or centrist position. Those actions defined by society as “deviant”—e.g., delinquent, bohemian, and radical—are largely youth phenomena. Parties of the extreme left and right almost invariably draw disproportionate support from young voters. As they advance in age, the overwhelming majority of “deviants” will “settle down.” This has meant that young people, as they grow older, tend to move toward the political center, as it is defined at the time of their mature years.

The moderating influence of aging has been stressed in a number of studies but no one, perhaps, has made the argument as cogently as Aristotle in his *Rhetoric*:

Young men have strong passions, and tend to gratify them indiscriminately.... They are hot tempered and quick tempered.... Owing to their love of honor they cannot bear being slighted, and are indignant if they imagine themselves unfairly treated.... They love... money... very little, not having yet learnt what it means to be without it.... They have exalted notions, because they have not yet been humbled by life or learnt its necessary limitations.... They would rather do noble deeds than useful ones: their lives are regulated more by moral feeling than by reasoning.... They think they know everything and are always quite sure about it; this, in fact, is why they overdo everything.

The elderly, however, are characterized by quite opposite qualities:

They have lived many years; they have often been taken in, and often made mistakes; and life on the whole is a bad business. The result is that they are sure about nothing and *under-do* everything. They “think” but they never “know,” and perhaps because of their hesitation they always add a “possibly” or a “perhaps”.... Further, their experience makes them distrustful and therefore suspicious of evilThey guide their lives too much by considerations of what is useful and too little by what is noble—for the useful is what is good for one-self and the noble what is good absolutely.... They lack confidence in the future; partly through experience—for most things go wrong, or anyway worse than one expects.

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As a middle-aged man, Aristotle saw virtue resting in the middle, "between that of the young and that of the old, free from the extremes of either." And these moderate views are held by "men in their prime," a period which occurs intellectually at age 49.

In regard to our immediate question—the likely future politics of the students who experienced the radicalized political climate of academe in the late 1960's—we would not expect either the "generations" or the "aging" theses to provide a complete or fully satisfactory guide. The two are not mutually exclusive: There could be *both* persistence of a distinctive generational orientation and a moderation of views with aging, for one has to take into account the general historical shift of political climate in a society. The question remains of how relatively important the distinctive experiences of the college cohort of the late 1960's are for its future political commitments and behavior.

The College "Generation" of the 1930's

It is possible to shed some light on this question by examining what happened to the political views of an earlier generation of radicalized college students, the students of the 1930's. It is overwhelmingly clear that the college generation of the 1930's moved far to the left of students of the prosperous 1920's. "Straw polls" on college campuses show that the conservative Republican Party had a substantial majority among students in the 1920's, but lost this decisively in 1932 and 1936. These "polls" were quite loose by academic standards. But the first significant systematic sample of a national population of students, taken by Elmo Roper for *Fortune* in the spring of 1936, furnished impressive evidence that the scattered local campus surveys accurately described the direction, if not the precise magnitude, of student attitudes in the 1930's.

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The use of a university is to make young gentlemen as unlike their fathers as possible.

Woodrow Wilson
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Close to one quarter (24 percent) of those interviewed were sympathetic to "socialism," 6 percent identified with "communism," 45 percent were for "liberalism," as contrasted to only 15 percent for "conservatism" and 2 percent for "fascism." This was a period of frequent demonstrations on college campuses "against war and fascism." Thus the targets of protest in the 1930's were similar to those of the 1960's, although the earlier tactics were less disruptive.

What was the enduring impact of the radical experience of the 1930's on that student cohort? The most striking feature of a 1947 *Time* survey

of college graduates is the steady increase in conservatism, as one goes from the youngest to the oldest age group. Those students graduating between 1934 and 1938 were, in 1947, considerable more conservative than the succeeding post-war graduates, but were distinctly more liberal than those who came before them. Similarly, Gallup surveys from 1948 to 1968 on the presidential choices of the college-educated show a persistent age association in the voting preferences of the college "generations." By and large, the younger the voter, the greater the preference for the more-liberal nominee.

It is important to keep in mind that the *Time* data do not show that aging is necessarily associated with an increasing conservatism in a fixed ideological sense. For example, between 1927 and 1947 there was a pronounced "liberalizing" of American politics, in that large numbers of people of all ages came to accept the need for far more extensive governmental intervention in the interest of managing and "humanizing"

“ “ Whenever the cause of the people is entrusted to professors it is lost.

V. I. Lenin

” ”

advanced industrialism. So while older college graduates in 1947 were *relatively* much more conservative and change-resisting than younger graduates, they were still by some *absolute* measure more liberal than they had been 20 years earlier.

By all the measures that we have been able to locate, then, the variations in political orientation among college generations over the last half century follow an essentially linear and age-related progression. There is little indication in our data that exposure to the radical-liberal politics which prevailed at many universities in the 1930's left its mark on the student body as a whole so that they held distinctive liberal-left orientations in succeeding years.

These findings apply to the mass of a given college generation, not to the small core group of committed activists who emerge in periods of intense politicization, such as occurred during the 1930's and again in the latter half of the 1960's. Studies of extremist political movements in many countries indicate that a major segment of their leaders and activists were first recruited as undergraduates. Relatively few highly educated radical leaders joined as mature adults. Often a given college generation has been noted in a revolutionary history for having contributed leaders of specific movements. Hence, though the mass of politicized students reverts to passivity or moderation in response to its postgraduate experience, generation-units of leaders may continue to reflect the lessons of their student days.

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The University Environment

If past American experience is any guide, however, it is likely that those students who experienced the radical and activist campus politics of the late 1960's will not continue in the distinctive frame of mind which they now show. Colleges are rather self-contained communities. Their students are abruptly removed from the constraints of parental experience, and placed in an environment in which peer group pressures are especially intense and pervasive. For four years they inhabit this world apart, a remarkably homogeneous and unstratified society. After graduation, however, most students—even today, when the absolute number rejecting a “careerist” outlook is far greater than ever before—reenter the highly differentiated larger society and take part in middle-class life in job, family and community. The intellectual legacies of the college years are by no means all lost, but the intense pressures of the encapsulated community which make for the distinctive and wildly fluctuating character of student political opinion are for most removed as abruptly as they had been introduced.

One major distinction, however, should be made. To say that as they grow older alumni become more moderate, less committed to the support of current proposals for major change, than they were in their college years does not mean that they necessarily become more conservative in any rigid policy sense. The crucial point is that the shift is *relative*: They become more moderate, as *against* an earlier position closer to the extreme.

But though relatively more conservative, they may remain as liberal in terms of the issues dominant in their college years. This results from a second, perhaps more important fact: While each college generation seems to go through the same process, any given later generation will have started at a more liberal or left position than the preceding one. In short, the historical slope of political attitudes among American college generations has been toward a more liberal position over time. So, even if the 1960's generation becomes more moderate, it, like earlier ones, is still likely to end up at a point further to the “left” than its predecessors, and to the “right” of its successors.

New Factors

There are, however, two new factors to be noted: size and cultural alienation. The college population of the late 1960's was approximately seven times as great as that of the 1930's (seven million compared to one million), which means that an equally small percentage (say five percent) of committed radicals would add up to 350,000 instead of 50,000 persons. The left-inclined students, dropouts, and alumni are now numerous enough to sustain a wide variety of counter-culture institutions, including “free schools” for their children, communes, the “underground” press, and the like. Those who have graduated in recent

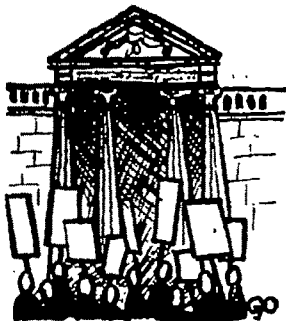
years, and who are "alienated" from the larger society, may find a home in enclosed communities composed of others like themselves. Hence, the radical or counter-culture community of the 1970's may turn out to be more supportive of "alienated" views than the environment experienced by graduates of the 1930's. But the overwhelming majority

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In the conditions of modern life, the rule is absolute: the race which does not value trained intelligence is doomed.

Alfred North Whitehead
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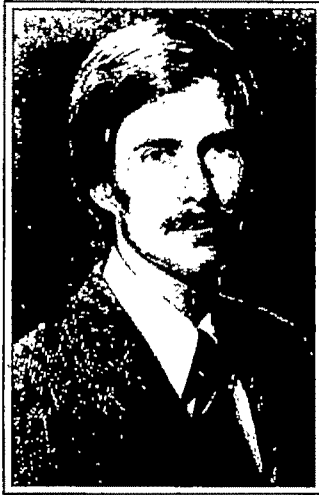
of recent graduates who had moved to the "left" during their college years will surely not live in communes, or choose to drop out of society and be downwardly mobile.

The future politics of today's students will, of course, reflect larger movements in American political culture, and aging will not necessarily be accompanied by "conservatizing" in any fixed ideological sense of the term. But whatever the prevailing political climate in the United States in 1980—short of some catastrophic set of events—the college cohort of the late 1960's and early 1970's will be *relatively* less receptive to the dominant social change-directed thrusts of the day, and in that sense more moderate or conservative than its succeeding cohorts in academe. In so far as we can generalize, Aristotle's emphasis on the moderating effects of growing older turns out to be more predictive than Mannheim's theory of the long-term consequences of the early political experiences of "generation-units."



THE ACADEMIC CAREER

By Donald W. Light, Jr.



University faculty have often been self-appointed and righteous critics of the more worldly professions. Here a member of academia scrutinizes its past and present state with unblinking critical detachment. He finds not a single profession, but a variety of disciplines, as well as a harmful split between the ideal of research and that of teaching, and a very human mixture of self-interest and idealism reflected in the recent trend toward academic unionization.

Professor Light teaches sociology at Princeton University. His special interest in education and the academic professions is reflected in his recent monograph, *The Impact of the Academic Revolution on Faculty Careers*. He is currently studying the problems of professional training in psychiatry, medicine and law.

Although the United States drew heavily on European models in developing its system of higher education, an irony of history is that now many Europeans and educators from other nations look to the American system for inspiration. And to compound the irony, this reversal of roles occurs at a time when Americans are expressing deep dissatisfaction with their own system.

Increasingly the criticism of American universities centers on the academic profession, which constitutes the permanent core and corps of U.S. higher education. How this profession acquired its present form and what problems it faces today will be the subject of this essay. Although I focus on the American experience, both the problems encountered and the lessons learned may have relevance elsewhere, since systems of higher education around the world seem increasingly to resemble one another.

Origins and Aspirations

Few people realize that there were three significant models of higher education and the academic man which influenced the shape of American higher education. These models retain their importance today as basic perspectives on what faculty do and how they are related to the larger society. First, the English or Oxford model of the 17th century emphasized the training of a ruling class. The implicit goal was to provide a common social, moral and intellectual experience for sons of the

elite. Here the professor served above all as a moral and intellectual teacher. Thus, teaching a specific subject was not so important in itself as in the mental discipline it developed. Teaching provided an occasion for instilling moral and intellectual values. From the 17th through the 19th century, America's elite colleges and universities drew heavily on the Oxford model.

The second source of ideas about higher education came from Scotland, whose universities in the 19th century were public and open. Scotland already had an extraordinary literacy rate, higher than England's, and the Scottish approach to higher education fit nicely on the top of a broad base of public education. In contrast to the English at Oxford, the Scots emphasized practical subjects such as accounting and government. Consequently, they valued the professor for what he knew about a specific subject, and the audiences he could draw. In a country like the United States, with its predominantly utilitarian view of public education, this concept of higher education and its faculty gained considerable influence. It signalled an entirely different curriculum and organization from the Oxford model, best seen in the state land-grant universities where practical subjects were offered to working adults all over the state by travelling teams of faculty. Nothing could differ more from the model of elite education.

Focus on Research

The third ideal, of course, came from Germany after the Humboldtian revolution that institutionalized research. It emphasized scientific training—even in the non-sciences—and scientifically conducted research aimed at expanding knowledge. As an institution, the university served other functions, particularly to certify people in various pursuits so that they could enter respectable careers. But the heart of the university lay in scientific research. This model differs from the other two in its neglect of teaching, except for training future scientists. Unlike the other models, the prime activity here is publishing research; thus it regards the professor first as someone who discovers new frontiers of knowledge through research.

The German model transformed the faculty in the United States and, some claim, turned the university into a service facility for scholars which neglected teaching except to certify students on the side. At Harvard in the late 19th century, Charles Eliot "integrated" the old, elite idea of teaching with the new research thrust by allowing research faculty to offer any courses they wished and letting students choose among them. In reality, the elective system allowed faculty to teach their research specialties, leaving general education up to chance. Nevertheless, the German model caught on and created an entirely new structure of prestige. Competition among institutions, a crucial force in American universities, caused the model to spread as ambitious

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presidents and deans urged their faculty to publish. The Scottish model of practical service remained strong only at state universities, not because faculty were not as eager to publish as elsewhere, but because state legislators were not easily impressed by research monographs or journal articles unless they heralded a new solution to a real problem.

Is There an Academic Profession?

A profession is a special kind of occupation which gains exclusive control over a prestigious body of esoteric knowledge. It then is allowed to recruit, train and license its members in return for promising to work honestly in the best interests of its clients. If this definition is accurate, then there is no academic profession. Rather, there are academic *professions*, because the knowledge base for each professor is his discipline. To regard all kinds of faculty as members of one profession blinds us from seeing that each discipline attracts different kinds of people, performs research in widely differing ways, knows only certain fields and is quite ignorant about other areas, has different types of careers, and faces distinct problems of its own.

The splitting of American faculty into quite separate disciplines was probably the greatest change it experienced. We forget that less than a hundred years ago all professors had about the same education. They drew on the same body of wisdom and intellectual heritage. Moreover, this heritage was primarily religious, so that the rise of the research professor dissipated the religious as well as the intellectual core of higher

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He who can, does. He who cannot, teaches.

George Bernard Shaw

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education. In the middle of the 19th century, no course drew such crowds at the great universities as moral philosophy, a synthesis of Christian principles and philosophy applied to politics, economics and sociology. By 1900, moral philosophy as an academic subject was dead at the research universities.

Not only does each profession have its own special knowledge; it also has its core work. While teaching takes most of a professor's time, it is published research which the profession rewards. In this way the academic professions differ from the service professions like law or dentistry, for the primary goal in academia is not the *application* of expert knowledge but the *creation* of new knowledge. A new study sponsored by the Carnegie Commission on Higher Education confirms what has been known for many decades: The professor who publishes in professional books or journals earns more, gets promoted faster, and

works at a more "prestigious" institution. The true professionals, then, are those professors who do scholarship and publish, not those who primarily teach. If research activity is used as the measure of the professional, then two-thirds of American faculty qualify. If publishing anything will do, then about half of American faculty are professionals. But if the professional is the person who steadily produces scholarly works, about 20 percent of the faculty belong to the academic professions. Here is the second major point about this important but little understood group: Not only are there many, distinct professions in higher education, but only a fraction of American faculty are true professionals, that is, research scholars who produce a substantial body of published work.

If scholarship is the core activity of the academic professions, teaching undergraduates is not. This means that despite all the arguments that scholarship gives teaching its lively edge and teaching puts narrow research into broad perspective, the two are in conflict. In nearly every poll of faculty, from state colleges to elite universities, professors are reported as wanting time to do research or to teach graduate students in research, and less time for college teaching. At the same time, these faculty uniformly say they enjoy teaching. What is going on? Quite simply, the weight given to publications for salary increases and promotions, even at institutions where faculty publish little, is so great that professors feel compelled to take time from their teaching in order to advance themselves. Yet faculty in the United States want their quality of teaching to count more towards advancement than it now does.

At Stanford University in California, only 20 percent of the faculty believe that teaching greatly influences advancements, while 51 percent wish it did. At a nearby state university, 4 percent rated teaching as very important for their career, but ten times that percentage wished it were. Here is a pathology of the American system—and not the American system alone—which tries to fuse brilliant, rare scholarship with universal, public education.

The Downgrading of Teaching

The injuries to students and faculty alike come from there being only one model of the successful professor. Our greatest need is to provide at least as many paths to distinction in academia as exist in the legal profession. There a person can aspire to be general counsel for I.B.M., a senior partner of a law firm, a professor of law, a distinguished judge, or a champion of the weak like Ralph Nader. The legal profession honors all of these callings; each provides great rewards. For university faculty, the most obvious model besides the research scholar is the excellent teacher. However, neither great nor less prominent institutions honor him. The last time a distinguished university wooed a great teacher was when Harvard stole sociologist David Riesman from the

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University of Chicago. But would they have bothered if he had not written *The Lonely Crowd*, the most widely acclaimed interpretation of American character of the postwar period?

“
If I were founding a university, I would found first a smoking room....
After that, if I still had more money that I couldn't use, I would hire
a professor and get some textbooks.

Stephen Leacock

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Part of the problem lies in the general belief that good teaching cannot be measured but that good scholarship can. The fact is that scholarship is measured in very imprecise, subjective ways and that few have seriously tried to measure college teaching in recent decades. Almost every “obstacle” in evaluating good teaching applies to scholarship as well. The only advantage which scholarship has is the self-fulfilling prophesy: If other people known as good scholars say a work is good, then it is good. In teaching the self-damning prophesy prevails: If students say a teacher is good, his colleagues suspect him of playing up to the students. The other factor which prevents teaching from being an important career is that colleges and universities, devoted primarily to teaching thousands of students, drive their faculty to publish. It is as if law firms tried to turn out articles for Law Reviews and neglected their clients.

Faculty vs. the Institution

A peculiarity of the academic professions is their dependence on one institution, the college or university. That institution defines their existence as hospitals and law firms do not; one is a doctor anywhere but one is a professor only at a college or university. Faculty have continually struggled against this dependence, not only by leaving but by turning universities into their servants. Thus to see them as distinct—the professors on one hand and the institutions on the other—rather than as part of the same whole allows us to understand their history and current problems much better. The spread of academic tenure, the demand by legislatures that faculty teach more and the resistance by professors to teach less, and the rise of unions among American faculty all reflect the tensions between these two bodies.

Tenure—which can roughly be defined as the professor's right to a lifetime appointment—first arose in the United States *after* the newly formed academic professions gained enough power to force universities to protect their members. As our interpretation of the academic professions would predict, the separate associations for each discipline

began *before* a national association of all professors was formed. That is, faculty first organized around their separate professional interests and then realized that they had common institutional interests as well. Moreover, the creation of the American Association of University Professors (AAUP) was an explicit effort to counterbalance the expanding power of university administrators. As universities became large enterprises run by ambitious entrepreneurs, they spread out quality (and cut costs) by filling the ranks with low-status faculty and took away powers which faculty had once had when the institutions were small.

The AAUP was started, appropriately enough, by leading research scholars. In the battles that followed, they used the threat of boycott and the arguments of academic freedom to establish tenure as a universal part of the academic world. Not only tenure, but a limited period of probation and professional review boards to judge disputed cases were won. Since tenure runs almost entirely to the advantage of the professors (he can break it anytime; the institution rarely can), it stands as a permanent symbol of the academic professions' dominant power.

The Attack on Tenure

But within the past two years, as research funds have run short and the number of youth in the 18-22 age group has declined, reducing the demand for university faculty, a rash of articles have urged that tenure be abandoned. An excellent essay by Dabney Parks, Jr. points out that while tenure has been defended in the name of academic freedom, one result has been that non-tenured faculty—less protected in their capacity to express their opinions—have less academic freedom. Tenure also limits educational reform, since sinecured professors are clearly the greatest obstacle to most innovations that have been attempted. Tenure rigidifies departmental lines which often obstruct both fresh scholarship and creative teaching. Finally, it divides the faculty into the Haves and the Have-nots, alienating the non-tenured junior faculty and fostering distrust. These arguments have always been true; thus their significance lies in when they are put forward. They reflect the currently weakening position of the academic professions.

Historically, tenure was a major victory in the academic professions' effort to turn the institutions where they worked into professional organizations, institutions which fully reflected their values and needs. But while all institutions of higher education in the United States have some form of tenure and other signs of faculty power, their actual operations differ considerably. Promotions, for example, at a research university, are decided entirely by faculty and largely by members of one's department. This collegial influence dwindles as one moves down the scale to institutions where less and less research is done. At local

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colleges, administrative officers of the institution have much more power over such "professional" matters.

The balance of power in work can be put this way: Teaching undergraduates is an *institutional* function performed by the faculty, and publishing research is a *professional* one. The professional scholar teaches as a service to the institution which gives him paid time in which to do his research. Even if he loves to teach, that is the contract. He also gains prestige, a stimulating round of life and a great deal of discretion over his time. The teaching professor, of course, teaches because he is paid to teach. This difference shows up in the direct relation between quality of institution (as measured by scholarly reputation) and teaching load. Given equal size, the lower its status the more hours and more students an institution's faculty teach.

The Rise of Faculty Unions

The patterns of unionization in the universities reflect the structure of the academic professions and their differing institutions. Unions are growing rapidly among American faculty, and as we would predict they are catching on first at the lower levels among faculty who do a lot of teaching, that is, who do not have a base of autonomy and promotion outside the institutions at which they teach. For the academic professional differs from the teaching professor in just this way. Since teaching is an institutional function and a local activity, a teacher cannot gain a reputation outside his institution in the regional or national circles of his discipline. Thus organized bargaining provides his only point of leverage against the institution where he works.

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A pedagogue is one who casts false pearls before real swine.

Anonymous
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However, a number of other forces have propelled the union movement at this moment in higher education. For a variety of cultural and economic reasons, unions have become respectable for white-collar workers and have been particularly successful among elementary and high-school teachers. In addition, faculty have experienced a rapid rise in salaries during the 1960's, followed by cutbacks in staff as institutions have felt the financial squeeze resulting from a decline in federal funds. Finally, the immense size of state and city university systems has helped unions catch on where faculty feel like workers in giant factories. However, unions will stand not as another symbol of power for the academic professions, but as a new symbol of the power which teachers have gained in the industry of universal higher education.

Inner Growth in Smaller Places

As the academic market becomes more restricted for both teachers and scholars, faculty will be forced to work with their administrations toward shaping a good life where they are. This can result either in deep adversary relations culminating in unions and strikes, or it can evoke a creative search for exciting ways to teach and learn. Both will probably happen, and institutional size will have a lot to do with the outcome. For in studies of all kinds, large size constantly emerges as a prime cause of alienation, rigid posturing, and entrenched self-interest by all parties involved. But let us here explore the possibilities of inner growth in smaller places.

Anything grows from its beginnings, and the college professor begins as a graduate student. The shame of the graduate schools for years has been that they constrict the imagination and teach buoyant souls to cower. They also fail to train students in the work they will be doing most of their lives—teaching—at the same time that they train students in what a few will do—research. Needless to say, there are great opportunities for growth in graduate school, and with the job market so tight, perhaps graduate schools will do better. For if one school could make its graduates stand out from the rest by giving them excellent supervision as they teach, or by putting them through a course on innovations in teaching their subject, they would be hired over their competitors.

Once they get a job, faculty are rarely encouraged to grow. Learning a new field, even if it seems important, is a frightening idea and may set back one's career. Even after becoming a full professor, matters do not improve. Almost no college or university has a program for professional development. Moreover, full professors work over twenty years without any change in their career, responsibility or rank. The result is widespread stagnation that is very expensive. Yet many older professors would eagerly embrace a chance for new growth.

The opportunities for personal development are great. Nevitt Sanford of the Wright Institute in Berkeley has come up with a number of good ideas for growth. Faculty, for example, can not only expand their grasp of a field but can also learn about the social psychology of the young adults whom they teach. A strong administrator or department head can encourage new approaches to teaching. He can push through interdisciplinary programs despite departmental opposition.

The rise of the academic professions, combined with rapid movement toward universal higher education, has made the American system vital and widely emulated. But the same combination of forces has produced the major problems it faces today. These problems of stagnation, neglect of teaching, and rigid careers are found and ignored in most countries. The time has come to solve them.

THE PERSON INSIDE THE STUDENT

By Joseph Katz

Those who run the universities have concentrated too strongly on the subject matter to be taught and too little on the psychology of the learner, argues the author. He suggests changes in curriculum and in the training of professors aimed at encouraging the student's interest and motivation and consequently his capacity to learn.

Joseph Katz is director of research in human development and educational policy at the New York State University at Stony Brook. He has taught psychology at various universities and now holds the title of Professor of Human Development. He is the author of *No Time for Youth: Growth and Constraint in College Students* and a contributor to *The American College* and *The Search for Relevance*, a volume concerned with university curriculum and student activism.



Recent discussions have contrasted learning which emphasizes the transmission of a "body of knowledge" with learning that takes into account the personality of the student. This might suggest that the issue is between two approaches to student learning, which have arrived at conflicting theories and recommendations. However, the weight of effort is not really equal. The proponents of a developmental or person-centered approach have been engaged in research for at least two decades, following students through their four college years, in an effort to measure the impact of curricular and extracurricular factors on student learning. But very little investigation has been done by the "body of knowledge" advocates, who have perceived little need to do so because educational practice has usually agreed with their conceptions. Moreover, faculty interest in the pursuit of their specialty, and in recognition by colleagues in their specialty, has reinforced the centrality of subject matter as traditionally conceived.

But the fact is that when one starts looking at students, certain developmental concepts offer themselves almost of necessity. One cannot study a student for long without recognizing, for instance, the role that motivation and aspiration play in his response to the classroom and to subject matter. From that point on it becomes clear that if a student is to learn, those responsible for this education must consider more than the transmittal of information or the sequences of its presentation.

The Psychology of Learning

Developmental theory concerned with student learning on the college level has now reached a fair degree of sophistication. Here are some of the conclusions it has arrived at:

- Students learn best if their studies connect with their motivations and their aspirations. These would include a sense of competence, a satisfactory life style, and a feeling of personal and occupational identity.

- There must be self-direction in the student's process of learning, and he or she must have some autonomous participation in the planning and execution of what is to be learned.

- The student's learning must issue in a product that has its own self-contained integrity, and it must be more than make-believe or a testing hurdle.

- The student's work must be useful to himself and, wherever possible, useful to others. This contrasts with situations in which the primary conduct for the student is a grade, which may be an ornament on his record and a ticket to further schooling, but has few other consequences.

- Learning is facilitated when students learn in groups oriented to a common task.

- The professor or other adults must be interested in the student's work, and convey this through relevant encouragement and honest evaluation.

- The professor must treat the subject matter in an inquiring mood, and must be interested in the subject matter he or she is teaching. (Hence students always rate the "enthusiasm" of a teacher as an important incentive to their own learning.)

- There must be no neglect of other developmental challenges that students face during their passage through college, such as the achievement of self-esteem, of competence, and of acceptance by others. To the extent that the student fails to achieve these personal goals, he tends to lose his willingness to learn. The student then resorts to "examination complicity," i.e. temporarily memorizing and then quickly forgetting after the examination is over.

- But if cognitive learning—that is, the intellectual mastery of information, method, and theory—is tied to personal development, both learning and development occur. For example, during this period in a person's life, a student is generally driven by sexual anxieties and needs. Properly guided, these drives can serve as a vehicle to lead students to a better understanding of the physiology of the body, as well as the social nexus and the general process of psychological maturation of which their emotional and social lives are a part.

In support of the developmental perspective, one could cite study after study indicating that the impact of the professor in the classroom is hardly proportionate to the expenditure of effort, people, time, and

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money. In a survey of five institutions which I conducted with a group of associates in 1970 and 1971, we found that only a small percentage of students ascribe great impact on their development to professors (15 percent of the men and 11 percent of the women). Compare this to the fact that 68 percent of the men and 78 percent of the women ascribe such impact to their peers, and 35 percent to their living arrangements.

Professors look for their rewards not so much in teaching as in the development of their professional subject matter and approbation by their academic peers. Professors have rarely received, in graduate school or through in-service training, the kind of preparation that they

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Ye can lead a man up to th' university, but ye can't make him think.

Finley Peter Dunne

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require for the pedagogical task of encouraging and assessing student learning. But perhaps the ultimate reason why professors cannot respond to the challenge of inducing learning is they have no adequate sense of how this is to be accomplished.

This situation points to the need for considerably enlarged help to faculty if they are to implement student developmental objectives. It calls for the introduction of the concept of *faculty* development parallel to that of student development, and the introduction of services to implement that concept. The concept of faculty development addresses itself strongly to the professor's function as a teacher. But, if developmental theory is right about the interconnections within the person, other functions of the professor's personality, including his emotional life, may increasingly become the object of inquiry and professional consultation.

New Kinds of Instruction

It is apparent that time is a very precious commodity and we will have to look for new arrangements to help faculty use time wisely. One practical suggestion is that we enlarge the numbers of students in some types of courses so as to make possible very small groups for other types of instruction. Another suggestion is that we devote a disproportionate share of faculty time to the freshman year, with the intent of equipping the student for increasing his or her self-direction and independence in subsequent years. We could also involve more students in the teaching of their peers, thus taking some of the burden off the shoulders of professors.

In addition, there are many people, working within the university, with skills and knowledge that are not represented in the current cur-

riculum; these are often people with great actual or potential ability to reach students. I have in mind people in administrative offices and research institutes, and the various kinds of service personnel.

Often these people, among them counselors and psychotherapists, are particularly well versed in aspects of personality development and of group processes. Many joint teaching arrangements utilizing these personnel are possible: for example, a professor could share his classroom with a staff psychologist, thereby gaining a better understanding of his impact upon the students and of possible ways to improve his teaching. The psychologist colleague might even make a contribution to the professor's thinking in the subject matter itself, by bringing the psychological perspective to bear on his field.

Traditionally, of course, faculty are reluctant to delegate teaching functions to other than members of their professional guilds. But if we can move faculty to redefine their role as facilitators of learning, we might decrease this reluctance. Professors might come to view themselves as a new type of impresario. If this approach can induce more learning with lesser amounts of their own time, they ought to be given proper credit—for it is the product, not the effort, that counts.

There is finally the resource of still another group of potential teachers. These are people from outside the university. There is an important

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Nothing in education is so astonishing as the amount of ignorance
it accumulates in the form of inert facts.

Henry Adams

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developmental reason for their use. Students represent a wider spectrum of attitudes and life goals than are found in the faculty. Learning thus depends, among other things, upon the availability of competent adult models. Hence a variety of such models must be sought outside the university. One can envisage many college students spending time in business and law offices, factories, governmental agencies, social and health services. This will have the further effect that students will learn to base concepts upon experience, to develop skills in the concreteness of actual situations rather than in the abstractness of anticipation, and to relate theory to skills. It will also give them a much more informed base on which to make their own occupational choices.

It would be easier to carry out these proposals if professors themselves could be moved to spend extended periods of time in nonacademic settings, in business, government, or in service agencies. This type of experience would enlarge the range of their competencies and interests, feed their curiosity, and improve the richness of their personality. And

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because they had been exposed to a wide variety of learning situations in the nonacademic world, these professors would be better prepared to teach students, a large majority of whom will work for the rest of their lives in nonacademic situations.

Curriculum and Examinations

In turning to the curriculum, I will only briefly mention the testing and examination system which is inherent in our curricular procedures in the United States. Probably no other system of higher education in the world relies as much on constant testing. This practice helps to segment the curriculum into pieces that never adequately connect in the student's mind. It also implies a conviction that most students will not do their work without constant supervision. Students live up to this expectation and develop external rather than internal incentives for learning.

Courses currently offered within a particular discipline are largely determined by the faculty's conception of what a body of knowledge is. There has been little systematic thinking about why the body of knowledge and its segmentations should be composed as they now are, and what the body of knowledge means in terms of student learning.

We might replace, for undergraduates at least, the division by fields or departments, and its attendant course structure, with arrangements that facilitate the development of comprehensive competencies. At the same time we would have to seek ways to overcome the strong tendency of many students to avoid areas in which they fear they might not perform well or to which they might have strong internal resistances.

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Education is... hanging around until you've caught on.

Robert Frost

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The learning I have in mind would be much furthered by a contract between the student and the faculty, a contract periodically to be revised. Hampshire College in Amherst, Massachusetts, has gone in that direction. The student in consultation with professors develops a contract for certain areas in which he will be examined. A high level of performance is expected of the student when he presents himself for examination. Such a system, needless to say, works much better in small institutions like Hampshire, where there is easy interaction on an almost daily basis between faculty and students.

To make my point more forcefully, I would like to indicate an ideal situation. Ideally we might abolish the bachelor's degree altogether. This would mean that students who enter an occupation immediately

The Person Inside the Student

after college would be examined as to their competency by members of the occupations that they wish to enter. Similarly those who go on to graduate school would be tested by the graduate school as to their proficiencies. This would take the colleges out of the certifying business. It would free them to do what they are purportedly doing, namely, to develop the general intelligence and the character of the student.

This would immediately change the roles of college teachers. They would stop being representatives of often impersonal authority, and become helpers of the students in their task of making their way in

“
It is not a mind, it is not a body that we erect, but it is a man, and we must not make two parts of him.

Montaigne

”

society. In addition, the demands of society would be segregated from the requirements of personal development. The present confusion between the two has helped neither the liberal arts nor professional preparation. My plan includes the proposal that more attention be paid to the student's occupational concerns, and that he be given more exposure to potential occupations. This would add zest to studies, particularly for many students who are the first generation in their families to experience higher education; and who therefore often need a more concrete goal to provide a focus for their efforts.

What I have proposed in this article may seem Utopian at the moment, but I suspect it will look less so in five or ten years. The greatly enlarged numbers and increasingly varied types of students attending colleges today, along with changes in the youth culture and rapid shifts in social mores and the economy, require rethinking of basic assumptions. There is a great hunger in our society, particularly among the young, for a way of life that is more in tune with genuine human needs, joining the desire for community with the enhancement of the individual. It is time for those who run our institutions of higher education to take concrete steps to humanize the learning situation and recognize more fully the developing person inside the student.

ORSON WELLES: A FINE EXCESS

By Vernon Young

A distinguished film critic finds in the movies of Orson Welles no solemn perfection, but almost always "a current of energy... a feeling of discovery... a fine excess." Vernon Young has been writing about international cinema for the *Hudson Review* over the past two decades. He was also for a time the European correspondent for *Arts Magazine*. His article is abridged from his recent book, *On Film: Unpopular Essays on a Popular Art*, published by Quadrangle Books in New York.



Stanley Kauffmann has written of Orson Welles that he has "no relation with his world of which his films are an expression. He is a scene and sequence maker, not a film-maker." As a Judgment Day verdict this is probably defensible, but I should personally recommend clemency. I believe that Welles's total contribution (to our enjoyment—hang the history of the medium!) is richer than the sum of its parts. His films are sometimes bad, but they are always interesting. Well, nearly always: I think of *Macbeth* and I groan. Welles told Francis Koval in an interview that nobody had judged that film on its own grounds; it was made in 23 days on a low budget. Mr. Koval didn't think quickly enough to reply (or perhaps he was too polite): "Mr. Welles, if you're foolish enough to attempt a movie in 23 days of shooting you should be prepared to take the critical consequences." And what I like about Welles is that he would have answered Koval, if I'm not mistaken, by rumbling, "Yes, you're right. I should."

He's one of the few directors who doesn't pull punches when he's interviewed. He says what he believes, without pomposity, without hanging back; in fact he's positively, if genially, high-handed, and I find that a relief from the kind of snow job that most of these characters try to purvey. If Welles doesn't often enough succeed in doing the real thing, judged by our loftiest standards, he knows the real thing

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when he sees it. (Among film-makers, he's one of the few who realize that director Vittorio De Sica has a kind of nobility.)

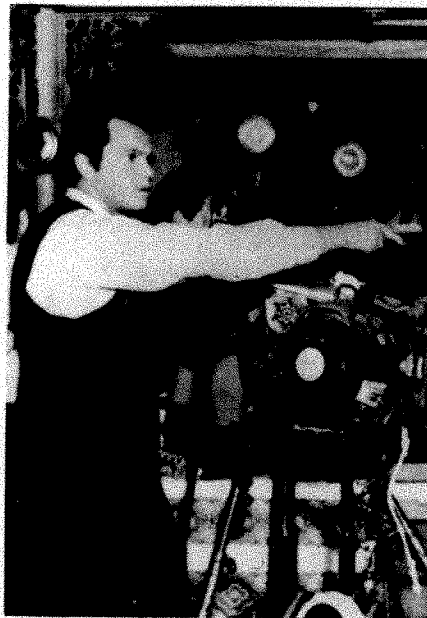
One curious strategy he employs: he pretends to believe that critics are highbrows because they're impressed by visual brilliance to the exclusion of inner content. I'm sure he means what he's saying, but in reviewable fact his own films are distinguished by their great creative invention, infrequently wed to any fundamental definition of man. As for that "highbrow" talk, I'm sure he can't consider himself a low-brow! I remember hearing him on a radio symposium with a panel of university professors. He was the only one present who said anything coherent. I think the world is in greater need of honest men than of perfect film-makers.

On Stage and Radio

Pardonably, I hope, I feel as if I had a personal investment in this man. My memory goes back to his importunate and dazzling beginnings. I don't believe it now, but I saw him play Mercutio on the stage (to the Romeo and Juliet of Basil Rathbone and Katharine Cornell) when he was seventeen. He *couldn't* have been as good as I thought he was because I wasn't much older myself, and who at that age has judgment? Talent, perhaps; judgment, no.

Nor shall I ever forget his eruption into radio drama with his Mercury Theater in the mid-1930's. "You want to know how to make radio theater exciting? I'll show you. Move over." Nobody had had such a dynamic conception of what you could do with the medium in terms of dialogue-and-sound montage. To this day it's a seldom occasion to hear anything as shaped to the ear (which in turn, of course, invokes the eye) as Welles's adaptations and his direction of them in those depression days. "The War of the Worlds" is a part of history; I'll tire nobody by repeating that story, but I remember other examples of his narrative virtuosity: *A Farewell to Arms*, *Heart of Darkness*, *The Count of Monte Cristo*. I don't know how he managed to tell the latter effectively in one radio hour, but he did so: that's why he's called Orson Welles. I never hear the opening chords of Tchaikovsky's *Piano Concerto No. 1* without expecting them to fade as the fudgy voice

"the young director"



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rides over, like oil on water, with oh-such-diffident authority, "Good evening, ladies and gentlemen, this is Orson Welles"—as who should say, "superfluous as it is to remind you."

A great showman. Is he a great movie-maker? Yes, he's a great movie-maker. Perhaps he has never made a great movie, like Max Ophuls. And as with Ophuls, it doesn't matter. These men have style. They have a *way* of doing something filmic that makes it seem quite as enriching as anything else we might define as more "profound" or, in the contemporary sense, "relevant." Because thou art virtuous, shall there be no more cakes and ale? Ophuls, by the way, paid Welles the greatest of compliments by stealing his effects (he who had no need of borrowings from anyone!) for the film *Caught* (1949). The whole ambience of the Ohlrig mansion was that of Kane's Xanadu, even to the camera perspectives that exaggerated the longitude of a billiard table, the contours of a sculpture, or the cavity of a fireplace; *and* the overlapping, fervent conversations in which two people start to say something at the same time, then each stops, waits for the other, and once again re-launches his part of the dialogue simultaneously with the antagonist. Welles did that, with a *loud whisper* treatment, on the staircase in *The Magnificent Ambersons* (1942), and I don't think anyone had done it before.

A Purity of Invention

The Magnificent Ambersons shows Welles at his most resourceful and is a fair indication of his most nagging problem: the style is precariously in excess of the subject and milieu. The doings in that family

THE MAGNIFICENT AMBERSONS

"the loving accuracy with which a period decor is expressed"



mansion are all terribly portentous and electrifying, filled with crystal-clear projections of figures in rear distance (process devised by cameraman Gregg Toland) and "from-under" shots to enhance interest; these imply an ominous aspect in figures who are seldom ominous. All very clever but not, squarely speaking, the world of author Booth Tarkington.

Yet seeing the film today, one's reservations from this standpoint are quickly overcome by admiration for Welles's unfailing purity of inven-



CITIZEN KANE

"the ego explored"

tion. Every shot and sequence is rewarding to those with a seasoned response to the audacity with which a film story can be told: the intersections of the off-screen narrative with the dialogue, the sharp economy with which the family crises are dramatized, with a critical eye to their gravity and to their unwitting absurdity, the loving accuracy with which a period custom, prejudice, or decor is without redundancy expressed. And among memorably weird performances, provoking laughter and pain in awkward partnership, that of Agnes Moorhead as

the spinster buried alive by the Ambersonian ethos is surely in the foreground of our recall. If nothing else, *The Magnificent Ambersons* is a laudable contribution to Americana, affectionate and shrewd. Nevertheless, the principal tendency of the film, when elsewhere underlined, was to become the primary Welles hazard: in most of his efforts there is, if I may coin a word, a *baroquity* in the service of entertainment which can't rise to the pitch of the informing manner. Which may be why Welles periodically returns to Shakespeare: it's the adequate vehicle for his art of the grandiose.

Citizen Kane

To see *Citizen Kane* today—the film, I suppose, synonymous with Welles for most people—is to realize what a brilliant sorcerer he was, how much he lifted from precedent film-making and made his own (and how much others then lifted from him and simply made it Hollywood). No film with such a reputation could stand up to critical scrutiny without showing its seams. There are scenes-for-padding in this film; they are salient now as they were not when we were freshly mesmerized by the virtuoso sequences that preceded and followed: the singing lessons hammered into Kane's talent-less wife; her plaintive appeal, "What do you *do* when you go out there every night with the audience

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CITIZEN KANE "virtuoso sequences"

hating you?" and his growl—"You fight 'em"; and the domestic life of Mr. and Mrs. Kane fraying out inexorably, comprised in about three and a half minutes of film—the breakfast table over the years as communication dries up—each scene in the sequence cut in devaluating proportion, from eight frames to four and finally two. How many film-makers in 1941 could do that?

One of my favorite lines is from this film. When Kane picks up his future wife on the street corner (by offering to share his taxi), he says: "My name's Kane. I own a coupla newspapers. What do you do?"

The chilliest critical objections to *Citizen Kane* came from the social pragmatists. To them the film was irrelevant because it didn't document the consequences of Kane's career. Its indictment of one of the colossal Borgias of capitalist-monopoly enterprise was confined to the private life of the man himself and was conspicuously lacking in the evidential complexity of his empire, the prodigality of his corruption, his political and financial chicanery, the slaughtered reputations, and the rest. In short, no teeming social texture. The film for them took place in a baroque vacuum, sealed off from the multitudinous damage wrought by the ego which was being, not without a wry touch of sympathy, explored.

There is no argument because the questions were raised in another room. If theirs is the *only* way of making a film on such a subject, it is pointless to tell them this was the film Welles made, this was the angle that interested him, these were the limits he proposed, this is what he could handle. If they wanted the other treatment they could have read Theodore Dreiser. If Welles had tried to do what some thought he should have done—well, we wouldn't have had *Citizen Kane*.

Shakespeare on Film

As late as the mid-1950's, Welles claimed that he had never made another film with complete independence before *Othello*. That independence was hard won. His backer pulled out and he paid for the film, which he made in Morocco, with his savings from sundry parts he had played in blockbusters. I am heartened to learn this because I have always thought that *Othello* was his most fully personal achievement after *The Magnificent Ambersons*; if more Welles than Shakespeare, that's more all right with me than it was with Eric Bentley when he first

Orson Welles: A Fine Excess

reviewed the film, and many other critics more conservative than Bentley.

I think perhaps we are all readier today to allow (up to a point) a liberal measure of freedom to Shakespeare-in-the-movies. You simply can't have the text intact and have creative cinema. You can have a good photographed play, like the excellent *Othello* of Laurence Olivier recently post-prepared for the television. But something has to go when you're movie-making; that something is most of the lines. Strangely enough, the poetry is not thereby lost. (Never have I seen a spoken *Romeo and Juliet* as fabulous as the danced version of Russian ballet.) The poetry, if we mean the words, is still there; there in the back of our heads.

In Welles's *Othello* you can't hear half the lines which are retained; the company is unsuccessfully trying to ape the throw-away skill of their director. It doesn't much matter. Every few minutes, as if sighting treasures rising to the surface from a sunken galleon, you hear something musically familiar go by. "Happiness to their sheets!"... "Lying with her—on her?" "What you will."... "Are you hurt?" "Aye, past all surgery."... "Othello's occupation's gone!" (This followed by the shot of a sail being lowered.)

The great sense of *space* Welles has! No director is memorable without this sense. As they debate the actions of Cassio, Othello and Iago pace in a forever tracking-shot on the vast topside of that Moroccan castle.

OTHELLO

"the fruits of vanity, passion, and jealousy"

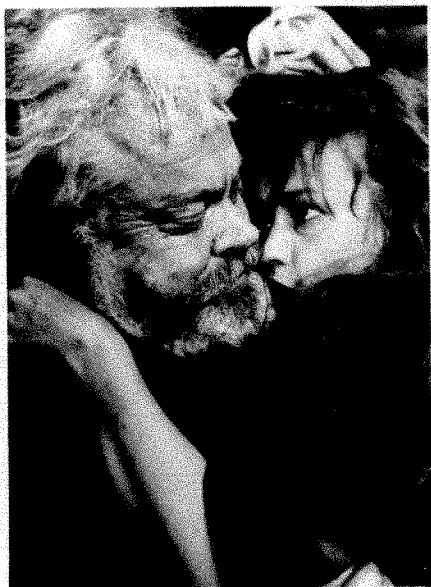


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When at last, clutching suspicion as he might an unsheathed knife, Othello cries out, "But, oh, the pity, the pity of it, Iago!" his face is suddenly removed from moment and place, tossed against an emptiness of sky. As he walks swiftly away from Iago, then collapses, towers careen and a woman's laugh punctuates the screaming of the gulls. His encroaching suspicions are otherwise pictured in shadowed corridors, in trenches between adobe walls, or in the oubliette of a staircase well; he spies on Desdemona from behind grillwork or across a dry moat: gusts of jealousy are paralleled by billowing cloaks, veering birds, and flapping sails.

I don't remember who, before Lytton Strachey, pointed out that Iago is a villain without an adequately expressed motive. But homosexual spite takes care of that motive completely, especially it explains his ruthless treatment of Emilia. In any case, the condition is explicit here and it works. One of the first shots in the film enforces it (we view the end of the tragedy at the beginning)—Iago, suspended in a basket, staring with mingled love and terror at the body of Othello as it is carried along the battlements.

Sergei Yutkevich tried to do an *Othello* as vivid as Welles's, but despite



CHIMES AT MIDNIGHT

"Welles as the heart-broken Falstaff"

the added feature of color, his film is dead. Every effect is patently calculated: the shot is set up, the actor is moved into it, and every symbol clangs like a bell. In the Welles film we are always in the moving thick, conveyed either by the traveling shot or the quick, quick cut: we see objects and events when the actor glimpses them, not before (like very early Hitchcock) and some actions we see only as a brilliant blur—like the attack on Cassio. The murder of Desdemona is great. Othello's black head floats as if bodiless in a greater darkness; he moves into the sparse light cast by the candle, asks in an abrupt, casual, toneless voice, "Have you prayed tonight, Desdemona?" Then

he grinds out the candlelight with the flat of his hand and strangles her with a gauzy coverlet, through which you see the contours of her face as you would on a death mask.

Welles didn't think too highly of his own performance, and while I won't rush to confirm his modesty I'll say that, if deficient in patience and depth, I never saw it conclusively excelled until a few years ago, by



THE STRANGER

"Welles's most brilliant failure"

Laurence Olivier's incredible impersonation of the Moor with a West Indian accent. But the assignments were far different, were they not? Welles was not attempting to particularize the Shakespearean role in all its nuances; he was trying to generalize it for purposes of film. He caught its essence, and substantially he caught the essence of the play: the fruits of vanity, passion, and mindless jealousy; the inadmissible suspicion working like malaria in the bloodstream; the irreversible surrender—then calamity alone, and Iago nursing his wound (both his wounds) like a caged vulture. And all this Welles took into the open air, into a world of surf and seabirds and scalding sunlight. If not the most profound filming of Shakespeare to date—I'd reserve that concession for Kozintsev's *Hamlet*—Welles's *Othello* is, I think, the most inventive English-language Shakespeare of the cinema. *Chimes at Midnight* is more moving in some ways (Falstaff played by Welles as if his heart had already been broken), but its inspirations were less breathtaking and there are too many camp actors cluttering the battlegrounds.

Drama and Melodrama

For my sorrow, Welles's most brilliant failure was *The Stranger* (1946). In it he played a ghoul who had been an executioner at a Nazi concentration camp. Escaping from Germany, he had incredibly turned up as a teacher, in, of all places, a New England preparatory school for

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boys. His identity is not suspected and he's living the safe life, managing to choke down the quotes from Nietzsche that rise to his lips whenever the defeated Reich is impugned. His pedagogic idyll is shattered when a demented associate from his oven days arrives on the scene; this loony has seen the light of day, acquired a species of religion, and has looked up his old friend so that together they can repent and pay the penalty for their crimes.

There is of course no solution to this contretemps except to murder the wide-eyed nuisance. Which Welles does; he strangles him in the woods and buries him under a carpet of autumn leaves. In one of the most striking film moments Welles ever devised, there is a beautiful sequence of inter-cutting here: between a troop of boys on a paper chase through the woods—refracted sunlight making church aisles of the maples, down which the boys leap, all eagerness and bright health—and the murderer skulking in the hollow, spreading leaves over the last smell of his past. Why—how—Welles managed to end such an adroit story, with its invocative geography (autumn in New England has never on the screen been so crisp to the touch), by means of a gimmick in the worst Hitchcock taste will be the first question I shall want answered if we ever meet.

Great aspirations constantly imperiled or vitiated by the melodramatic ruse—the wrong torso in the right museum. This is the perennial Welles predicament. Are these solecisms forced on him? I don't know; I'd like to give him the benefit of the doubt. In *Lady from Shanghai*, where he assembled a plausible colony of evil lotus-eaters off the coast of Acapulco, did he have to wind things up in a hall of distorting mirrors in a San Francisco amusement park? Did he *have* to cast Anthony Perkins as Joseph K. in *The Trial*? And having succumbed to the vogue of the sex movie (*The Immortal Story*)—in his own handsome and meditative way, to be sure—was it necessary to employ a male who was so obviously immune to seduction by any Jeanne Moreaus whatever?

A Brave American

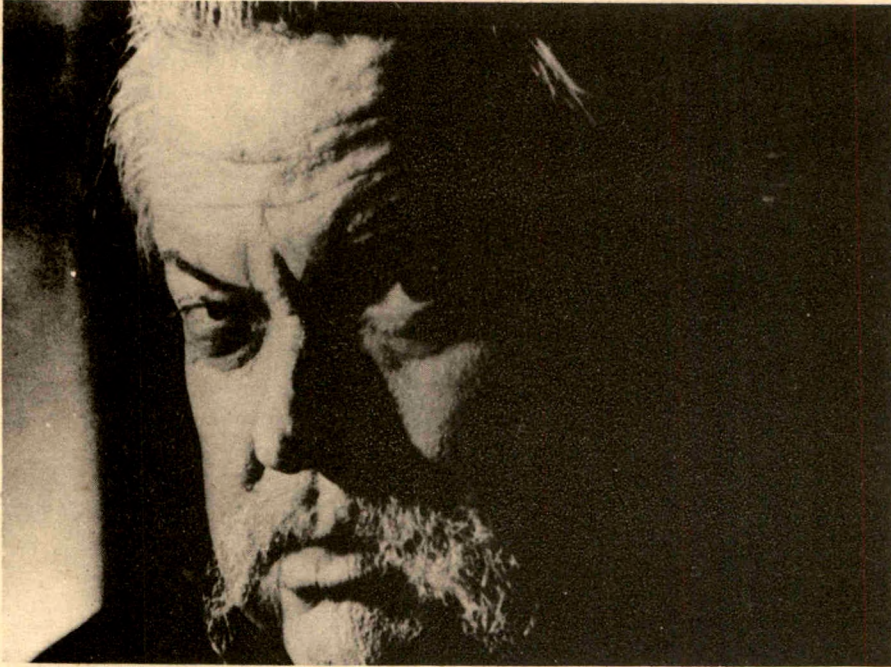
Even so he's Orson Welles. A brave American. He lives uprooted; he works in no social context of his own. And in what social context would he work if he were making films in the United States? The chances are that he never gets financed for his most fruitful ideas. Freer than he would be in Hollywood, he's nonetheless dependent on the whims of the wealthier—the stealthier. The miracle is that he gets any films made at all. He stands for something—hard to define, perhaps, but when you say "Orson Welles" people know what you mean. I've noticed they always smile.

His films surprise by a fine excess (to put it mildly); there's usually a current of energy running through them, and a feeling of discovery, sometimes hazily resolved. Don't we still always expect something

Orson Welles: A Fine Excess

from a new Welles movie? And don't we usually get something? Not a solemn perfection; sometimes an outrageous evasion; often an honorable failure. And he does have a preferred subject which provides at least half his films with a perceptible unity: the unheroic titan, sometimes evil, sometimes comic, sometimes just big, who is never as formidable as he sees himself—the pathos of deflation.

Famous without being popular, Welles doesn't attract crowds, bless



THE IMMORTAL STORY

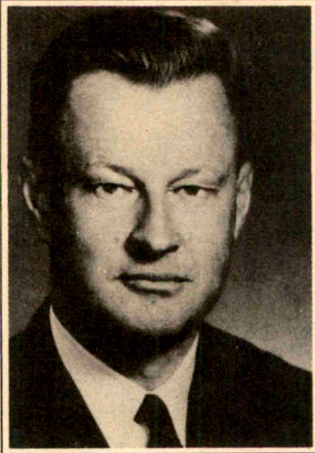
"an unheroic titan"

him. There is no Welles cult. That's something he has to be grateful for; not even Americans confuse him, as they do Ingmar Bergman, with the Saviour. He is safe from endorsement by the Now Crowd, the Festival Cats, the New Leftovers, and the unchuckling post-graduates who soberly sniff in the tracks of Susan Sontag.

"The waste remains, the waste remains and kills." If Welles knows the Empson refrain he must appreciate it, but I don't see him crying over it. He shares the fool belief of all those who won't say yes to the easier choice, the strongest pressure: tomorrow's achievement will vindicate him for yesterday's blushes, for the trial by error and all the spendthrift detours. In that wise story of Anatole France, *The Juggler of Notre Dame*, the juggler who had no suitably reverent offering performed a few expert acts before the high altar. Our Lady found them acceptable. Why should we be less generous?

A NEW FOCUS FOR U.S. FOREIGN POLICY

By Zbigniew Brzezinski



American foreign policy today lacks the clear focus it had during the "cold war" years, writes Professor Brzezinski. But he sees the present ambiguous situation as offering a unique opportunity to create practical international structures conducive to global peace and to economic development in the Third World. His article is abridged from the July 1973 issue of *Foreign Affairs*.

Zbigniew Brzezinski is professor of government at New York's Columbia University. He is currently on leave to serve as the director of the Trilateral Commission, organized by distinguished private citizens in Japan, Europe and the United States to study common problems. Dr. Brzezinski formerly served as a policy planner for the State Department and as an advisor on foreign affairs to Vice President

Hubert H. Humphrey during the 1968 presidential campaign. His books include *The Soviet Bloc, Alternative to Partition, Between Two Ages: America's Role in the Technetronic Era*, and most recently, *The Fragile Blossom: Crisis and Change in Japan*.

The United States was thrust into the world some 30 years ago. That jolting experience generated a degree of domestic unity concerning foreign affairs unusual for a democratic and pluralist society. Largely as a consequence of that shock, U.S. foreign policy came to enjoy for a quarter of a century the advantage of broad popular support and a seeming sense of direction.

Both World War II and the subsequent cold war gave America's involvement in world affairs a clear focus. The objectives of foreign policy were relatively easy to define, and they could be imbued with high moral content. To be sure, periodic frustrations in the conduct of the cold war prompted different Presidents—from Franklin D. Roosevelt to Lyndon B. Johnson—to define their policies and priorities in varying terms, but the essential character of America's involvement remained unchanged.

By the time President Nixon assumed office in January 1969, however, the American consensus on foreign affairs was a thing of the past. It would be premature to conclude that the Vietnam War was the major factor in blurring America's vision and shattering her agreed perceptions on foreign affairs. That the change may be the product of more complex forces, and that consequently the Vietnam War was more of a catalyst

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than a cause, is suggested by a remarkable study of America's posture in foreign affairs, published in 1952. Its author, Frank L. Klingberg, having systematically collated data on U.S. involvements abroad, argued that since 1776, America's relationship with the world has been characterized by alternating cycles of "extroversion" and "introversion." He concluded, with remarkable prescience, that "it seems logical to expect America to retreat, to some extent at least, from so much world involvement, and perhaps to do so sometime in the 1960's."

This forecast reinforces the proposition that the present change in America's mood may represent something deeper than a reaction to the war in Vietnam. The change that has taken place—cultural, political and social—is doubtless far-reaching. One senses it in the new generation's values, with its dislike for "power politics" and its ambivalence about existing U.S. foreign commitments; in the wary mood in Congress, especially in regard to foreign involvements, including even altruistic ones such as foreign aid; and in the waning of the internationalist foreign affairs elite concentrated on the East Coast.

The Impossibility of Isolationism

There are many obvious parallels between the current change in American mood and earlier shifts from extroversion to introversion. Yet, in a more basic sense, these parallels are misleading. Neither on the objective plane nor the subjective plane is the real choice today between internationalism and isolationism. Indeed, it is hard to define the practical meaning of these terms in the context of contemporary conditions.

On the objective level, the situation in which the United States finds itself is quite unlike that of the earlier cycles of introspection. In the area of economics the United States is now the leading international investor both in the less-developed and in the advanced industrial economies, with returns on these investments representing for some major U.S. enterprises the critical source of their margins of profit. This outward thrust of U.S. business and capital makes the United States very vulnerable to any new wave of protectionism, and it does create a powerful constituency with an enormous vested interest against any return to "introversion."

A related major historical change—one that has also transpired since World War II—involves the transformation of a basically self-sufficient American economy into an increasingly resource-dependent economy. Some experts have estimated that the United States is already dependent on imports for 26 out of some 36 basic raw materials consumed by its industrial economy; and this dependence is growing most dramatically, but by no means exclusively, in the energy field. As a consequence, America finds herself so deeply involved in the world economy, a condition reinforced by its special monetary role, that on the economic plane

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the concept of isolationism becomes at worst a suicidal policy and at best an irrelevance.

In international politics, America's options have been similarly transformed. In the past, the United States could exercise the luxury of choice between abstinence and involvement. Today, despite the debates over the desirability of the continued U.S. military presence in Europe, most Americans see their security tied closely to the continued independence and stability of Europe and Japan. The debate about troop levels is over the best means to enhance that interdependence, not on the question of its reality or even desirability. More generally, nuclear weapons have so transformed the nature of security that sudden shifts in the political-security balance are viewed as dangerous to all parties, even competing ones, and this creates interdependence even among rivals.

Ambiguous Elements

The question of subjective attitudes is more complicated, though it is revealing to note that those who favor policies of protectionism or of America's withdrawal from her various security-political engagements object to being described as isolationists. They insist that the policies they advocate involve a higher and more responsible form of internationalism. Moreover, many vocal critics of American intervention abroad tend to be strongly opposed to American economic isolationism and to favor instead continued and even expanded American involvement in various forms of international cooperation.

Overtone of old-fashioned isolationism, none the less, do make themselves heard, most notably within American labor concerned with the export of American jobs abroad by American multinational corporations and by the similar impact of foreign imports on employment. But here, too, the attitude is not a consistent one. Labor also tends to be strongly in favor of continued U.S. political and security engagements abroad—it is semi-isolationist at most.

Isolationism on the level of policy thus tends to be a partial view and not a coherent all-embracing doctrine. Even its adherents accept the proposition that at least in some respects the United States should remain actively engaged in the world, and in that sense they partake of a residual though vague consensus that the world is becoming an interdependent entity, from which there is no complete withdrawal. A broad and undefined notion of global interdependence seems to represent the general principle which most Americans share.

This underlying consensus, however, is vague. It lacks a sharp focus defining, as was the case in the past, the character and thrust of America's relationship to the world. Moreover, the shared notion of global interdependence is given philosophical and political substance in significantly divergent ways by two contending schools of thought

A New Focus for U.S. Foreign Policy

which today represent the principal lines of division among the concerned and articulate public. The outlook of these two contending schools—each of which initially starts with the same basic premise of global interdependence—may be best capsulated by the terms “power realism” and “planetary humanism.”

Power Realists vs. Planetary Humanists

The power realists, generally more conservative in their values, tend to be preoccupied with the more traditional concerns of international affairs, particularly with such issues as strategy, the relationship of forces, the balance of power, diplomacy and monetary policy. They attach a very high value to stability, both as a concept and as a norm. They may often disagree on prescriptions and priorities, but they do hold a basic view in common in that they see the world as still dominated by *international* politics.

In contrast, the planetary humanists tend to think of the globe more as a unit beset by certain common problems. When attempting to translate into policy their basic predispositions, they tend to concentrate on such matters as ecology, nutrition, development, social justice and equality, or limits to growth.

There are thus overtones in the above division of the older debate in America between “realists” and “idealists.” But the differences are important: the new power realists accept more and more the notion of political interdependence, and their concern with stability preempts to some extent the idealists’ earlier preoccupation with peace. Planetary humanists, unlike their predecessors the idealists, are much more concerned with social change—rather than peace—in a world which they see as beset by dynamically mounting socio-economic crises, and their remedies focus on socio-political reforms. Many of them decry stability and accept the desirability in some cases even of violent change.

Despite this division, the power realists and the planetary humanists still remain in fundamental agreement that global interdependence—regardless of whether priority is given to political security or to social well-being—is the inescapable reality of our time. But this underlying agreement merely refutes the proposition that introversion is a viable and appealing choice. By itself, it does not provide a relevant policy focus for America’s relationship with the world.

President Nixon’s Response

America is thus not turning inward, but her vision is unclear. President Nixon’s foreign policy is a response to this condition of ambiguity as well as a reflection of it. As a response, it has been effective and occasionally brilliant; as a reflection it remains beset by a basic conceptual difficulty. Richard Nixon, who prides himself on his pragmatism, has perceived more sharply than many of his contemporaries—certainly

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more clearly than his rivals—the nature of the changed circumstances in which America finds herself. He sees—in part correctly—his foreign policy as a realistic response to worldwide and domestic changes. Recognizing the ambivalence at home, he has striven to fashion a policy that would gradually reduce America's commitments abroad while shaping what he and his associates have occasionally called "the new structure of peace." It is, by and large, a policy much in keeping with the evolution of his own views; in that sense, Nixon—though obviously the beneficiary of able advice from Henry Kissinger, his special assistant for national security affairs and now also his Secretary of State—is to a greater extent the conceptual architect of his Administration's policy than any other U.S. President since Woodrow Wilson.

During the first four years—outside of seeking to end the Vietnam War—Nixon has concentrated on manipulating the new U.S.-Chinese-Soviet triangle. The fruits of this manipulation have been the partial codification of the cold war and the transformation of it from a "game" in which each side played by its own rules and kept its own score into one in which at least the rules are becoming more common. Moreover, the centrality of the arms race in the U.S.-Soviet competition has been somewhat reduced and, as a consequence, the competition has shifted to other areas. In addition, the normalization of U.S. relations with China has in all probability reduced Soviet freedom of action against its formerly while putting a higher premium in Moscow on American-Soviet accommodation. At the same time, American-Soviet agreements have begun to create a web of relationships that may gradually serve to reduce the intensity of their competitive relationship.

Nixon's foreign policy has thus involved an admirably intelligent application of the power-realist approach, skillfully adapted to prevailing domestic circumstances. The proof of its skill is to be found in the fact that, despite profound domestic divisions, the President's foreign policy by and large has not been the object of a major national debate. Even those who reject its underlying premises and its priorities grudgingly concede its successes.

Developing Nations and Alliances

None the less, President Nixon's foreign policy is open to several criticisms, on the operational level as well as on the broader level of historical pertinence. More specifically, three issues deserve critical consideration. The first pertains to the implicit indifference on the part of the Administration to the problems of the less-developed nations; the second criticism relates to the Administration's handling of alliance relationships; the third concerns the question of the historical relevance of the balance-of-power approach to world affairs in the 1970's.

The problem of the less-developed nations is *the* moral problem of our time. Given America's traditions, that dimension of the problem

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alone should make it an important one. Moreover, almost every index indicates that the gap between the developed and the developing nations is widening. Access to literacy, circulation of newspapers, the impact of mass communications, increased political participation are more rapidly transforming the way people think than economic growth is transforming the way people live. The consequence is a heightened awareness of global inequality and an increased determination to erase it. Intensified social strife and global animosity are bound to be the consequence of mankind's failure to tackle the problem of global inequality.

The Administration has also been defective in its handling of alliance relationships. Though not isolationist, the Administration has certainly been unilateralist in dealing with problems affecting American-European and American-Japanese relations. As a result, the Japanese suspect that the United States is today assigning a higher priority to American-Chinese relations than to American-Japanese relations. Europeans are uneasy about America's longer-range intentions in Europe, and are baffled by America's willingness to deal directly with the Soviet Union while dragging her feet on such subjects as broader East-West talks or the recognition of the present European territorial arrangements. Recent monetary difficulties have intensified the political malaise, in part because the United States has relied more on a unilateralist tactical approach than on the development of a broader and longer-range strategic policy.

Limits to Balance-of-Power Approach

Third, one may wonder whether the balance-of-power approach provides an adequate response to a world dominated by rapid change, by sharpening social disparities, and by a widespread resentment of inequality. It has often been noted that the principal powers engaged in the balance-of-power game are of a highly asymmetrical character: the United States and the Soviet Union are reasonably well matched militarily but are certainly not matched economically; Japan and Europe are the economic peers of the United States and Russia but they are certainly not military peers. China may be becoming a peer in certain military dimensions, but it is not likely to be an economic peer for quite some time. The search for balance among these five may thus prove to be elusive.

Moreover, there is the more basic question concerning the adequacy of the power-realist approach as a tool for a comprehensive understanding of our historical condition. The power realists have a strong case when they argue that the downgrading of national might, of diplomacy, and of the more traditional tools of international behavior could jeopardize the chances for peace by prompting international instability. They are also right when they argue that an exclusive concentration on the planetary issues, though morally much more appealing, ignores the

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reality of a world of nation-states, of a world of national rivalries, of national armies and of ideological hostilities. Even if not isolationist in spirit, planetary humanism can be charged with being in many ways escapist in essence.

Yet those who emphasize planetary humanism have a powerful argument when they warn that to ignore the longer-range threat is to invite within a mere decade or two a situation of global anarchy, of the fragmentation of social and political institutions, of the collapse of the very stability to which the power realists attach such a high value. Moreover, the balance which the power realists advocate is based primarily on convenience and not on principle. It implies no fidelity to common goals and no shared definition of common concepts. In a rapidly changing world, such a balance could at some point become inconvenient to those whom the United States has considered as its allies. Thus, the notion of no permanent enemies or friends could become contagious, rebounding against the United States sooner than one thinks.

The Politics of Interdependence

The difficulty of articulating acceptable priorities for the United States, a difficulty already enormous because of the domestic split between the two major contending schools of thought, is compounded by the transformation which foreign affairs have undergone in the years since World War II. The politics of interdependence, for example, are beginning to overshadow the politics of confrontation with the communist world. Yet despite the partial codification of the competitive relationship prevailing between the United States and the U.S.S.R., the problem of security remains a high-priority item. For one thing, the danger of war has not disappeared entirely, though war as an act of policy has become a luxury which only the poor and the non-nuclear nations can now afford. Indeed, the possibility of an accidental war may now be higher than in the past, given the extraordinary complexity and abundance of modern weapons. To reduce this danger, efforts to codify and expand the developing U.S.-Soviet arms control arrangements must be continued with a vigorous pursuit of SALT II, the second phase of the Strategic Arms Limitations Talks.

Although the power realists have been reasonably successful in making the competitive U.S.-Soviet relationship more stable, the other two major problems confronting U.S. policy—namely, that of the less-developed countries and that of alliance relationships among the advanced countries—cannot be effectively tackled on the basis of the power-realist approach. The condition of the less-developed countries, indeed of the planet as a whole, requires greater concentration on the issues raised by planetary humanists, while the question of alliance relationships calls for a creative blend of both approaches.

This blend is needed because of the transformation which inter-

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national affairs are undergoing—a transformation which introduces novel elements even as the old ones still remain partially operative. Modern society is also thrusting into a new age, the character of which we do not still fully understand. Material wealth is creating a strange spiritual emptiness in some of the more advanced industrial societies, while scientific developments pose an ominous threat to the integrity of the human being himself by raising the specter of human malleability through social engineering. There is thus a growing need for more sustained reflection on the condition of modern man and for a mutual learning process among the societies that are in the forefront of the technetronic revolution.

It is to this newer and enormously complex task that American policy will have to address itself, and in so doing seek to respond to the central concerns both of the power realists and of the planetary humanists. Realism and the lessons of the past show clearly that the United States alone cannot mount the needed response, that the process of shaping a more stable and socially progressive world calls for a wider effort among those who share both certain philosophical assumptions and the needed resources. This condition imposes a special obligation, in the first instance, on the United States, Western Europe and Japan to shape their policies with broader concerns in mind than the dictates of national interest alone. Unless these advanced sectors of the world move toward greater and more active collaboration, there is a high probability that the fragile global economy and the barely emerging sense of global community will be shattered, pitching the world back into international animosities, fragmenting the world economy and intensifying the social strains within both the advanced and the developing countries.

Trilateral Cooperation

Closer cooperation among the advanced industrial societies, which share certain political values in common, would help to create a stable core for global politics, on the basis of which a more sustained response to the traditional threats of war, or to the new danger of social fragmentation brought about by poverty, or to the broader image of collapse of the global eco-system, can be undertaken. The Atlantic concept was a creative response to the problems of the cold war era. Today, the Atlantic framework is too narrow to encompass the multitude of challenges—and opportunities—that confront the international community. It is a recognition of this reality to propose that without closer American-European-Japanese cooperation the major problems of today cannot be effectively tackled, and that the active promotion of such trilateral cooperation must now become the central priority of U.S. policy.

This means nothing less than deliberate, closer and more institutionalized political consultation among these three power centers. These consultations, designed to develop common policies with regard

to the various problems confronting the global community, must be on the basis of trilateral parity. In particular, Japan must be included in any new initiative from the very start. The purposes of such closer consultative relationships would be to stimulate a greater degree of shared political perspective among the governmental bodies of the three units; to promote the practice of regular, more formal political consultations; and to develop common political planning with regard to problems or areas of mutual interest.

Doubtless, many obstacles to such trilateral cooperation will have to be overcome. Some Europeans may resent an approach which seems to place Atlantic relations on a par with Pacific relations, and suspect that it represents essentially an American effort to shift onto European shoulders some of the imbalances in U.S.-Japanese relations. Some Japanese may feel that the initiative reflects a desire to entangle them in an expanded NATO. These fears are real, even though they are not justified. For good historical and cultural reasons, Atlantic relations will remain for some time to come of a different order than Pacific links, while trade and monetary problems between the United States and Japan have already had such a major impact on Atlantic relations that they simply cannot be compartmentalized. To acknowledge this reality, and to postulate the need for a wider political response on such matters is not, however, to extend the framework of NATO to the Pacific, but to respond jointly to joint concerns. Thus rather than refute, the above fears highlight the need for more sustained trilateral consultations and additional trilateral links.

Confronting the Third World

The very process of seeking to shape a community of the developed nations would inescapably involve a greater degree of consultation concerning the major longer-range problems of global politics, most notably that of backwardness and poverty in the Third World, a concern uppermost in the minds of the planetary humanists. It is to be expected that in the next two or three decades we will witness an intensified crisis in the Third World, brought about by the twin impacts of demographic growth and the spread of education. Both will make global inequality even more intolerable at a time when equality is becoming the most powerful moral imperative of our time, thus paralleling the appeal of the concept of liberty during the 19th century.

This quest for equality is already being felt both within societies and on a global scale; it is, therefore, essential that the richer nations develop more comprehensive, more cooperative and more planned policies toward the poorer parts of the world. They must further increase the participation by all of the advanced countries in institutions designed to improve the lot of the Third World (for example, Japan might usefully participate as a member of the Latin American Development

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Bank, and Europe and America might participate in other regional activities of this sort as well).

One of the frequent objections to the conception of the community of the developed nations is that it will be "a rich man's club," insensitive to the problems of the Third World. Yet it is difficult to see how the monumental problems which the Third World confronts can be resolved unless advanced countries do cooperate in generating a major response. Social stability and progress are not going to be achieved if the three most powerful units of the world are pushed by their internal and external dynamics into increasing protectionism as well as other economic conflicts.

Similarly, objections have been made that closer trilateral cooperation as the central goal of U.S. policy runs counter to the aim of improving relations with the communist world. Yet that improvement is not likely to be attained in a setting which is unstable and thus feeds the residual revolutionary aspirations of the communist leaders. A co-operative component, embracing the richest and the most powerful countries, seriously seeking to develop common policies designed to promote more rapid growth in the Third World, is hence more likely to develop enduring and constructive relations with the communist states than individual policies of détente, often competitively pursued.

Ending Spheres of Power

Indeed, a gradually emerging community of the developed nations will be in a better position to pursue true détente, the aim of which is not an artificially compartmentalized globe, fundamentally in conflict with basic global dynamics, but a world in which spheres of exclusive predominance fade. Just as American hegemony in Latin America must decline—and the United States is beginning to accept that reality—and just as a Japanese co-prosperity sphere in Asia is not compatible with Asian nationalisms, so Soviet predominance in Eastern Europe will have to be gradually replaced by an Eastern Europe that—though retaining some links with the U.S.S.R.—is part of a wider European association.

The policy outlined above would involve a building-block approach toward the goal of creating a global community that is stable and progressive. By being responsive to the central concerns of the power realists and of the planetary humanists—both of whom recognize the reality of global interdependence—it might also lead to greater clarity in America's global engagement.

A CRITIQUE OF CONTEMPORARY IRRATIONALISM

By Charles Frankel



A number of influential books have appeared in recent years attacking science and reason as misleading guides to the nature of the universe or the fulfillment of human needs. In the following article, abridged from the June 1, 1973 issue of *Science* magazine, a noted U.S. philosopher finds the case for irrationalism understandable but unconvincing.

Currently professor of philosophy at Columbia University in New York, Charles Frankel was assistant secretary of state for educational and cultural affairs from 1965 to 1967. He is the author of many books on philosophy and public affairs, including *The Case for Modern Man*, *The Neglected Aspect of Foreign Affairs*, *Education and the Barri- cades*, and most recently *A Stubborn Case*, a novel about university politics.

Although the 20th century has been marked by an almost unbroken series of challenges to the authority of rational methods of thought, the current clamor against these methods has certain unique features. On the whole, established churches and governments have not encouraged this attack. It is not associated with any widespread popular movement of moral or religious revivalism, nor is it, in the minds of most of those identified with it, a conservative movement whose purpose is to restore authority and recover old values. On the contrary, they think of it as, among other things, an effort to relieve oppression and injustice and to break through to new heights of vision radically liberative for the human spirit. Indeed, this movement is mainly a creature of what is called, or miscalled, the "liberal Establishment." Both in the United States and abroad, its most sympathetic audience comes primarily from the more comfortable and better educated classes. And its central inspiration and emotional thrust have been sustained by people belonging to universities and other institutions whose traditional commitment has been to the practice and propagation of rational inquiry.

Nevertheless, despite the setting and auspices of the present revolt against reason, it is essentially not new in its content. I speak not of irrationalism in personal behavior or in the organization of society. I speak of irrationalism as a studied and articulated attitude, proudly

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affirmed and elaborately defended, which pronounces science—and not only science, but, more broadly, logical analysis, controlled observation, the norms and civilities of disciplined argument, and the ideal of objectivity—to be systematically misleading as to the nature of the universe and the conditions necessary for human fulfillment. Despite the new language, half jargon and half slang, in which this irrationalism is expressed, the actual assertions on which it rests can be found in classic treatises on mysticism and in the utterances of many traditional philosophers and poets.

What validity is there in the claims that this irrationalism puts forward to be accepted and believed?

Five Propositions

Current irrationalists speak out of very different kinds of experience. For example, R.D. Laing's *The Politics of Experience* (1967) argues the case for irrationalism from the point of view of a radical British psychotherapist. Tom Wolfe's *The Electric Kool-Aid Acid Test* (1968) presents an account, in the mode of the new "fictionalized" journalism, of irrationalism in the context of the drug culture. Theodore Roszak's *Where the Wasteland Ends* (1972) states the case for irrationalism from the standpoint of Philosophical Romanticism, although the author is a professor of political science. (In *Mind and the Modern World*, published in 1973, Professor Lionel Trilling describes Roszak's 1969 book, *The Making of A Counter-Culture*, as "perhaps the best-known and also the best-tempered defense of the ideologized antagonism to mind.") Other irrationalist writers who have obtained a considerable following include Norman O. Brown and Carlos Castañeda.

The degree to which such varied authors rest their case on the same fundamental principles is striking. These propositions can be reduced, I believe, to five:

(1) The universe man inhabits is divided into two realms—one of appearance, the other of reality. The former is marked by accident, doubt, uncertainty, coldness, alienation. In the second, doubt is dispelled, time and death have no sting, one is embraced by a world congruent with one's deepest desires, and discord and trouble are dissolved in an encompassing sense of harmony and coherence.

(2) The reason that people mistake appearance for reality is that their definitions of reality rest on biased presuppositions which their culture, class, and practical concerns impose upon them. "There is no such 'condition' as 'schizophrenia,' but the label is a social fact and the social fact a *political event*," says R.D. Laing. In the same vein, Theodore Roszak writes, "*Reality* marks out the boundaries of what might be called the collective mindscape, the limits of sane experience." Irrationalists differ as to the best way to break loose from this enslavement to collective prejudice, but they agree that truth and reality are achieved

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only when experience is approached in nakedness of mind.

(3) Human nature exhibits this dualism between appearance and reality. A war goes on inside each person between the "cerebral" and the "emotional," the "conscious" and the "intuitive," the "empirical" and the "rhapsodic." And when the rational department attempts to extend its domain beyond its own rightful borders, it dehumanizes man and devalues nature. To quote Roszak again:

Our proud, presumptuous head speaks one language; our body another—a silent, arcane language. Our head experiences in the mode of number, logic, mechanical connection; our body in the mode of fluid process, intuitive adaptation; it sways to an inner purposive rhythm.... It may seem that to speak this way is to deal in a crude dichotomy of human nature. It is. The dichotomy that tears at our personality is crude; but I did not invent it. I have only inherited it, like you, from the antiorganic fanaticism of Western culture.

(4) The unmistakable sign that we have gone astray is when we arrive at states of consciousness in which subject and object are distinguishable. Thus, science is to be distrusted on principle, for it rests on the distinction between the subjective and the objective. Describing the diverse influences playing on the "sensitivity training" movement, Kurt Back writes in *Beyond Words* (1972):

Perhaps the common thread... is the rejection of the intellectual aspect of life.... It is a concerted effort to turn away from the emphasis on intellect, on tool-making abilities of the human animal, on classification, in short, on mediation of any experience through reflection; and to push the participants toward a direct experience that is not thought about and not analyzed.

Similarly, we know we have gone wrong morally and emotionally, according to irrationalism, when we feel separate from other human beings, or alienated from nature, or divided within ourselves. The possibility that, in the irreducible nature of things, there can be discordances between the human creature and its environment—that nature can be less than a perfect fit for man—is not contemplated. If there is discordance, human beings are responsible: we are doing or thinking something wrong. Specifically, when we are dissatisfied with our place in the scheme of things, it is because we have allowed the so-called "rational" mode of comprehension to dominate the others.

(5) Accordingly, all human problems, cognitive, emotional, and social, are reducible to a loss of harmony—harmony between man and his environment, his head and his heart, his ideas and his instincts. Thus, beyond its assertions about the nature of man and his universe, irra-

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tionalism offers an image of the good life. It is a life free from unrest and unease—a life released, through passionate ecstasy or rapt contemplation, from the regretfulness of time, the vexations of decisions, and the risks of fallibility. Whether or not one agrees with irrationalism, it is easy to understand why it has been perennially attractive. It offers the vision of a kind of peace and unequivocal acceptance and commitment from which the normal perils, pains, and worries of human existence have been removed.

But what of the soundness of these five propositions?

Appearance and Reality

Irrationalism is not alone in distinguishing between “appearance” and “reality.” The scientific process regularly does the same thing, in two ways. First, it resists or reinterprets the gross evidence of our senses (consider Copernicus and Galileo, for example) by testing sensory experience against the demands of overarching laws and theories. Second, it pierces the curtain of established belief, replacing ideas supported by conventional opinion or official authority with other ideas, for which independent and impersonal evidence exists.

Indeed, it is passing difficult to understand why the myth persists among many educated people that rational inquiry thins out the world or deprives human experience of its extra dimensions of meaning. Thanks to science, the present world makes available to those who will do their homework subatomic particles, DNA, marginal utilities, relative deprivations, the Minoan culture, the story of evolution. This adds immeasurably to the import to be found in daily existence, to the connections to be drawn, to the implications to be read, to the “unseen things” to be adduced.

What science and rational methods *have* done to “denude” nature is, first, to have introduced ideas for dealing with it that require specialized study and that are not easily available to the man on the run; and second, to have deprived nature of her anthropomorphic and animistic qualities. Science thus presents a nonhuman environment no longer perceived as subject to moral law or shaped to the size of human emotions. That this is the character of the natural universe is, admittedly, a harsh lesson to learn. For the sake of argument, agree that it may even be a false lesson. Still, it draws a sharper distinction between “appearance” and “reality” than does anything in the scheme of philosophical irrationalism.

Dreams and Their Meaning

It is against this background that Roszak's preference for the deliverances of “the dark mind” are, I think, best understood. Why, he asks, should we prefer the deliverances of our minds when awake, to the deliverances of our minds when we dream?

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We in the contemporary West may awake each morning to cast out our sleep and dream experience like so much rubbish. But that is an almost freakish act of alienation.... It is the physicist's time we march to, time as time would be if there were no living thing to transform existence into experience; time such as machines can measure out in the lockstep of equal and abstract measures. The most threatening heresy of the dark mind lies precisely in this: it brings us to the still center of time's axis, where the turning wheel no longer turns.... It is just this lawless defiance of literalness and necessity that the intolerant waking mind rejects....

But the "intolerant" waking mind, if one looks closely at the matter, merely rejects the idea that our dreams, shot through with moral and emotional import and constructed to the shape and dynamic of our fears and wishes, are as solid a basis for a true account of nature as the experiences of our more consciously critical and disciplined waking lives. Of course, logicians and scientists often forget or ignore their dreams and push them below the threshold of consciousness. But this implies no philosophical or intellectual commitment special to them. Mystics and rhapsodists do the same thing.

I know of no scientifically informed individual, or partisan of reason in philosophy, who, as a matter of principle, dismisses dream experiences as "so much rubbish." Dreams are often a springboard to remarkable inspiration, in science as well as in poetry; and, at the very least, dreams tell a good deal, if analyzed, about the nature of the human self and human experience. But that necessary analysis is not performed while one is dreaming.

In fact, it is a caricature to suggest that we in the contemporary world ignore "the dark mind." Our interest in dreams is not less than that of our ancestors; like them, we try to tell our fortunes from our dreams. It is only in our method of inquiry into dreams, and in our theories about their causes, that we differ from them.

In sum, when one looks at the issues with some concern for facts and intellectual precision, irrationalism's distinctiveness lies, it seems to me, not in the fact that it asserts a difference between "appearance" and "reality," but in the fact that it applies *a priori* standards in determining what "reality" must be. It knows in advance that this "reality" must meet the human heart's desires, even the wildest desires welling up in our nighttime visions. In contrast, when scientific investigation distinguishes between what is "real" and what is only "apparent," the distinction is always specific, made in a particular context and as a consequence of a particular inquiry.

The irrationalist asserts that the methods of so-called "rational inquiry" are also compromised: they rest on presuppositions and therefore tailor the conception of reality to antecedent standards. Is this charge a just one? I think not. It involves a triple fallacy.

Is "Rational Inquiry" a Deception?

First, no inquiry of any kind is possible, nor is any commerce of the human creature with its environment, without assumptions or, at least, specialized and selective thrustings and responses of the organism. The irrationalist regularly suggests that he conducts his own explorations of reality without falling prey to this necessity of human existence: he floats on the Sea of Experience, absorbing all, imposing nothing. But such a mental performance would teach nothing, yield nothing; it would be an encounter with the unidentified, the indefinable, the unpicturable, the unrememberable. Moreover, from a psychological point of view, such a performance is impossible. Even in dreams, when something outside the dreamer's control seems most powerfully to take charge of him, his wishes, fears, and inveterate assumptions are patently present.

The second fallacy is the notion that all presuppositions, merely because they are presuppositions, are equally impositions on the nature of things. But the fact that a process of thought called "scientific" rests on presuppositions does not put it on the same level with every other process of thought. Everything depends on the specific content and character of the presuppositions in question and on the controls that exist for checking, correcting, or rejecting them. Rational methods, whether in the law, physics, child-rearing, or personal hygiene, begin with presuppositions that are supported by successful experience in the past. They are sustained only as long as they meet successive challenges and serve as elements in explanatory frameworks that guide inquiry to reliable new results more effectively than do alternative frameworks.

Parts and the Whole

The third error in the irrationalist position derives from its own controlling preconception. The irrationalist holds that any presupposition is necessarily misguided because it is inevitably partial and selective and therefore distorts reality. This is the Wholistic Assumption—the view that all things are internally related in such a way that they are parts of one single organic entity, so constituted that if it changes in any one respect it must change in every other respect. The assumption persists from Parmenides to F.H. Bradley; it is recurrent among mystics. But this assumption, although it expresses a hope that many men of great poetic and religious feeling have fervently entertained, is not one on the basis of which anybody can consistently think or act. It would involve his wrenching into unrecognizable shape common notions on which he inevitably relies.

For example, in everyday life, as well as in science, the law, and other specialized activities, we often speak of the "nature" of a thing or a person, or the "character" of an event. When we do so, we do not mean to include all of that thing's or event's relations and traits, possible as

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well as actual, accidental as well as essential. This is because intelligible discourse requires us to define and limit the subject matter of the discourse and to indicate those features of it from which, in terms of some explanatory framework, others of its salient features can be deduced and explained. The "nature" of a thing, in short, is only a selected subset of interrelated properties of that thing. To discard this notion is to say that there is never anything such as accident or irrelevance; it is to say, indeed, that there is no distinction to be drawn between a consecutive argument and a nonconsecutive one.

It is this Wholistic Assumption that lies behind the statements of writers like R.D. Laing that the distinction between sanity and insanity is a purely conventional or political one. But do such propositions as that fire burns and knives pierce rest for their confirmation entirely on conventions and political fiat? And must an individual be at one with all Reality in order to escape the charge, when he asserts such propositions, that he is a victim of sectarian prejudices?

Reason and Feeling

The irrationalist's theory of human nature is steeped in the tradition of the dualistic psychology it condemns. It talks about "reason" as though it were a department of human nature in conflict with "emotion." But "reason," considered as a psychological process, is not a special faculty, and it is not separate from the emotions; it is simply the process of reorganizing the emotions, of setting up a plan for satisfying them, a scheme of relative priorities constructed in relation to the resources and constraints of surrounding circumstance. As Hume said, reason is, and of necessity must be, the slave of the passions.

To be sure, reasoning is a process with a certain emotional tone of its own: it involves the feeling of controlling one's feelings, of delaying final judgment, of actively entertaining alternative ideas, and of judging all ideas, one's own as well as other people's, by the same tests. The strength of the rational emotion, accordingly, is not usually equal to that of our first-order emotions. It is only under comparatively rare circumstances, and normally under fairly artificial conditions, that the second-order emotion, which is the emotion of reason, can become intense and self-sustaining, and can yield an excitement equivalent to that caused by emotions such as love, hate, and awe. This is why the mores and institutions of the scientific community and the civilities of liberal society are so important. They nourish and reward rational emotion and provide social procedures that make up, in part, for the weakness of reason as an aboriginal component of human psychology.

As a pragmatic matter, what irrationalism asks is that society invest less—or nothing at all—in maintaining the institutions, and the codes of ethics and etiquette, which have proved necessary to support the emotion of reason. Only an extraordinarily sanguine attitude about the

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inherent reasonableness of man's instinctual life, only a confident faith, belied by all experience, in the unforced, providential symmetry between the needs of human nature and the structure of the universe, can explain the willingness to take such a one-sided chance on human impulse and spontaneity. Far from introducing a note of disharmony, reason is a harmonizer; for it is our first-order emotions, our spontaneous impulses, which are disharmonious one with another.

Eliminating Conflict

The belief in the universe's total and perfect integration with human needs also underlies the irrationalist notion that, when reality is genuinely understood, all forms of separateness and division—within the self, between individuals, between the "subjective" and the "objective"—will disappear. The assumption is that problems of choice between competing desires will not arise; that no activities such as planning or the conservation of scarce resources will be needed; that no conflicts will arise over the distribution of these resources. (Or is it the assumption that these difficulties, which characterize the world of appearance, will be left to a class of Helots, practicing the arts of reason, to solve, while the emancipated enjoy Reality in its higher kindness?)

In brief, for the irrationalist, the universe is good; it is man, rational man, who has willfully made it evil, all by himself. Irrationalism, behind its long arguments and often impenetrable rhetoric, is an attempt to solve the ancient problem of Evil and to restate the ancient myth of the Fall.

It is in this context that the irrationalist's notion of the good life may be evaluated. Although the spokesmen of irrationalism make much of words like "ecstasy" and "rhapsody," the vision they offer of how men should live is essentially passive and wistful. It is not the active, exploring image of Prometheus or Odysseus that they offer, it is that of the Lotus-Eater. The dream is of a scheme of things in which human beings face no difficult dilemmas and all good things are equally possible. What, after all, is the imperative for rationality in action? It is simply that, in human life, appearances are deceptive, impulses and desires at cross-purposes, and time, energy, and resources limited. Irrationalism asks us to believe that these constraints do not exist in the world, not when it is rightly understood; irrationalism asks us further to believe that rational methods, which emerge to mitigate these constraints, are their cause.

The above consideration of the assertions on which contemporary irrationalist doctrine rests also tells us something, I believe, about its sources.

Undoubtedly, there are special features of the current scene that help to explain the particular audiences, the popularity, and the language and style of this irrationalism. Among these features are the marketing

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needs and habits of a competitive economy, the peculiar position of youth, the drug culture, and the anti-intellectual implications of much that passes these days for "advanced" educational, psychological, and philosophical theory.

There are other factors. One is the damage done by uncontrolled technological change. Another is the discredit done to scientists' reputation for common sense and common humanity by individuals—some of them scientists, some of them charlatans—who present, in relation to complex and grievous human problems, simplistic notions that parody scientific method. Considerable damage has also been done by scientists, among whom social scientists are perhaps the most notable, who exaggerate the amount of sound and applicable knowledge they have and who offer confident solutions to social problems—solutions that, when tried, turn out to be only a mixture of pious hope and insular moral judgment.

Science as a Threat

But when the nature and the antiquity of the arguments for irrationalism are considered, we become aware, I think, that the quarrel between supporters and opponents of rational methods represents an ancient division in the Western soul. In the disagreements between the Sophists and the Pythagoreans, Aristotelian and Augustinian Christians, Dominicans and Franciscans, Coleridge and the Utilitarians, Henri Bergson and Bertrand Russell, we have successive reprises of this drama. It rises to fever pitch when scientific discovery accelerates and when the discoveries that science makes seem more and more subversive of inherited beliefs, social creeds, habits of action, laws, or the soundness of old and cherished hopes and hates.

Under these circumstances, irrationalism offers a promise of relief and immunity. There can be no doubt that, although it points only clumsily at an evil, the evil is there. The careful rational methods by which knowledge and technique have been advanced have only rarely been used to examine the purposes to which this knowledge and intelligence are harnessed. It is natural that science, in such a setting, should seem to be a Frankenstein to those who are threatened by it. But irrationalists have no monopoly, either in fact or in logic, on recognizing the frivolity, inanity, ugliness, and cruelty that are abroad in the world. Without reason, furthermore, indignation can be indiscriminating; and appeals to "conscience" and "morality" become only the demand that others acclaim one's prejudices.

I would add one final point. It often seems to me that disagreements over "rationalism" and "irrationalism," at least in their milder phases, stem from a misunderstanding. A matter of taste and style is mistaken for a matter of ultimate moral and cognitive significance, leading to the kind of sweeping assertions that I have considered. But once the issues

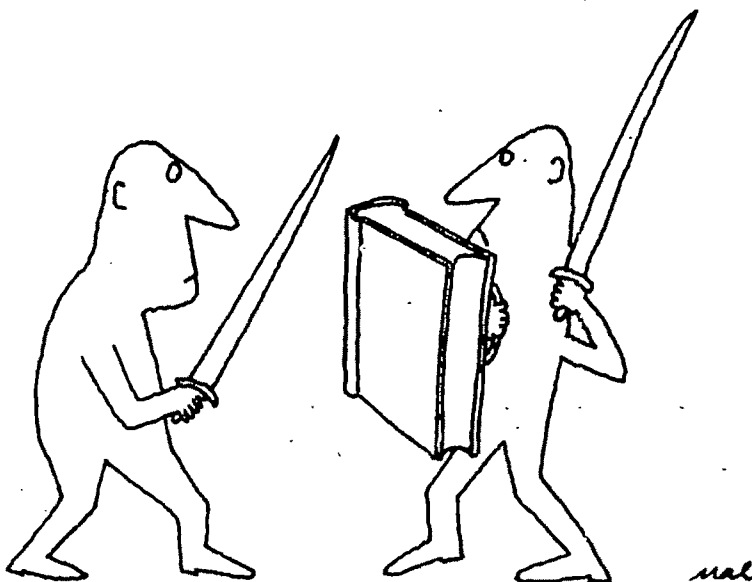
A Critique of Contemporary Irrationalism

I have discussed are set aside, there still remains, of course, a difference. It is the difference between Haydn and Wagner or between Voltaire and Rousseau.

A Tolerance for Differences

Thus Theodore Roszak, describing what he calls "the hard-edged cerebral elegance of the Enlightenment," says that "it wanted no more and would tolerate no more of life than sound logic, good prose, and exact numbers might accommodate." But the music of Mozart, a major product of the Enlightenment, can hardly be described simply as "cerebral." *Don Giovanni* offers a view of life in which values other than sound logic, good prose, and exact numbers are given serious attention. It is possible to enjoy both the worldly poetry of Alexander Pope and the visionary poetry of William Blake; it certainly ought to be possible, if we can't abide one or the other, to follow a policy of live and let live. Must we really demand the resolution of radical metaphysical disagreements or suggest that we occupy different levels in the hierarchy of salvation because our preferences differ in such matters?

The policy of mutual toleration was also a product of the Enlightenment, and it expressed that age's conception of rational dealings between human beings. I presume that when irrationalists attack the ideal of rationality, few of them mean to attack this practical proposal for coexistence. To that extent, they, too, make obeisance to reason.



CHESS AND BOBBY FISCHER

By Harold C. Schonberg



Few competitive events have aroused as much international excitement as Bobby Fischer's contest with Boris Spassky for the title of world chess champion in the summer of 1972. Here a passionate amateur appraises the unusual demands of the game and the even more unusual qualities that drove Fischer to the summit.

Harold C. Schonberg is a chess enthusiast better known as the senior music critic of *The New York Times*, where his witty and knowledgeable columns won him the Pulitzer Prize in 1971. His books include *The Great Conductors*, *The Great Pianists* and, most recently, *The Lives of the Great Composers*. His article is abridged from the July 1972 issue of *Harper's Magazine* by permission of the author.

World chess champion Bobby Fischer is a legend in his own time—Bobby the *enfant terrible*, Bobby the monomaniac, Bobby the recluse, Bobby the international grandmaster, Bobby the Mozart of chess.

He was called the Mozart of chess when he won the United States championship in 1957 at the age of 14. In those days he was a growing boy with a ferocious will to win and an infinite aptitude for the game. He was sullen, suspicious, moody; refused to wear anything but sport shirts, denims, and sneakers; knew nothing but chess, cared for nothing but chess. Today at 29 he is a huge young man, six feet two inches, well proportioned, with a shoulder spread from here to there. He wears business suits when necessary, including a necktie, and even puts on shoes. And he has developed a few social amenities. But he is still a man who knows nothing much outside of chess and cares for nothing but chess. He is still moody, is anything but well read, has few friends (and none, it seems, outside of chess circles), will not talk about his private life, and carries on his chess with maniacal intensity. The child was father to the man.

Up to recently he never made much money. That state of affairs is due for a drastic change. As winner of the world's championship match he made close to \$160,000, a sum absolutely unprecedented in chess circles, where a \$5,000 first prize is considered the height of staggering luxury. A great deal more money will be coming his way. Already

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Bobby is being asked to endorse products, write books (he has been offered a \$65,000 advance for his autobiography), work up a syndicated chess column.

Yet it was only a few years ago that nobody would have given a busted pawn for Bobby's chances at a championship match. As a teenager, his successes were so phenomenal—U.S. champion at 14 and history's youngest grandmaster at 15—that it seemed for a time he might attain the world title at the beginning of his career. He failed in two early tries, however, and then for several years he refused to play in the world-title competition. He claimed during that time that the Russians acted in collusion and that it was impossible for any Westerner to win the championship. Finally the elimination system was changed and he came back into the competition.

Contests of Nerves

His assault on the world title began in 1971 when he won a qualifying tournament to advance to an eight-man series of elimination matches. In these he beat Russia's Mark Taimanov and Denmark's Bent Larsen by unheard of 6-0 scores, then overwhelmed former world champion Tigran Petrosian of the Soviet Union, 6½ to 2½ to get his chance at the world title. The Brooklyn-born chess genius reached the summit on September 1, 1972 when he closed a two-month match against Russian champion Boris Spassky with 7 victories, 3 losses and 11 draws for a score of 12½ to 8½.

The goal that Bobby has set for himself, however, surpasses the world's championship. He has a sheer compulsion to become recognized as the greatest player who ever lived. Any given evening, a large percentage of the talk at any New York chess club revolves around Bobby, and what makes him tick, and how to explain his 100 percent sublimation into the intellectual-aesthetic world of the 32 pieces on the 64 squares. This is his world, and in it he is supreme. It is there that he can impress with his strength, his *machismo*, his superiority. And it is there that he can dominate another mind. Bobby himself has said that his great thrill in chess comes at the point in a game when he realizes that his opponent is in a vise. He calls this crushing the opponent's ego. Everybody agrees that Bobby satisfies his emotional life by watching his opponents disintegrate. In the process his own ego is correspondingly built up.

For chess is much more than an intellectual arrangement of pieces with a certain end in view. It is an affirmation of personality. The game requires imagination and creativity—the ability to see, or sense, possibilities hidden to less refined minds. On the grandmaster level it is also a psychological encounter. Some years back, Dr. Ben Karpman wrote an article in the *Psychoanalytic Review* about the psychology of chess, and he spent much space discussing the style of Germany's Emanuel



Spassky and Fischer: *"classicists of clean, direct chess"*

Lasker, the world's champion from 1894 to 1921. Lasker was the greatest over-the-board psychologist in chess history. He consciously played to his opponent's mental quirks. In Dr. Karpman's words, the essential element in a game for Lasker was a

contest of the nerves; he uses the medium of the chess game to fight, above all, his opponent's psyche, and he knows how to bring about the nervous collapse, which otherwise occurs only after a mistake, even before a mistake has been made.... He is not so much interested in making the objectively best moves as he is in making those most disagreeable to his opponent.... Suddenly Lasker begins to play magnificently and to show his real strength. The opponent's nervous collapse and shattered morale finally result in a catastrophe at the chessboard.

A Classic Style

Styles vary. Some players, such as Larsen or Russian ex-champion Mikhail Tal, are gamblers, romantics, who favor slashing attacks and wild sacrifices. Some, like Petrosian, are cautious and even timid. Some, like Cuba's Capablanca in the past and Fischer and Spassky today, are classicists, playing clean, direct chess with seldom an unharmonious or eccentric move. There are hypermodern and avant-garde players, and there are (the majority) eclectics. A classicist is not going to meet a romantic like Tal and indulge in a wild melee. Rather the idea is to try to keep the game along simple, well-analyzed lines. Any player who gives Tal a chance to exercise his combinational genius is flirting with suicide.

Like Capablanca, Bobby has a classic style. He can engage in combination play and sacrifices with the best of them, but he normally does not look for complications. Instead he finds a theme to the game and pursues it relentlessly. He has, of course, a memory encompassing even for a grandmaster. A great chess player must have in his head hundreds upon hundreds of "book" openings. In tournament play today, the first dozen or so moves are largely "book," and are more or less automatically played. For hundreds of years the openings of chess have been so thoroughly analyzed that there are no longer any genuine surprises in the overwhelming majority of games. Once in a while a player may throw at his opponent a line popular a hundred years ago, hoping that it will be unfamiliar, or hoping to throw the opponent "out of book." Larsen tried that against Fischer in the first game of the Candidates Match, learning to his sorrow that Bobby, who never has forgotten anything, was perfectly familiar with the opening. That is exceptional; most players seldom stray from accepted lines in the opening.

The Importance of Openings

No player can afford to make the slightest mistake in the opening. That is hard for the amateur to understand. The amateur will point out that after the first few moves the various possibilities in a chess game approach infinity. What the amateur does not realize is that of the infinite number of possibilities, most are demonstrably wrong. An opening has a theme, and anybody departing from the logic of that theme is going to be punished. That is why a weak player has no chance against a master. The master knows all the openings and can capitalize on even the slightest error. Many chess games may run 30 or 40 moves with one player in a lost position because of a miscalculation in the opening. Analysts nod knowingly. "He was lost after the eighth move," they will say.

If chess were merely a matter of memorizing openings, the world would be full of grandmasters instead of the lonely 82 (as of 1972) among earth's billions. Chess is much more than memory. There is a strong creative element to it, and that is what separates the merely good grandmaster from the immortal. It is much the same thing that separated Mozart from his lesser contemporary, Karl Ditters von Dittersdorf. The chess genius, like the mathematical or musical genius, sees certain inherent possibilities in a situation that less gifted intellects cannot begin to envision. The chess genius thinks differently from others. He does the unexpected. All of a sudden comes the unexpected thrust, the flash of vision, and it is a moment of sheer intellectual and aesthetic beauty. Whether this beauty is expressed in musical notes, or in a formula, or with chess pieces, it is a symbol of man's desire for order expressed in an original, unforgettable manner—and that, possibly, is as good a definition of beauty as any.

Logic—plus Intuition

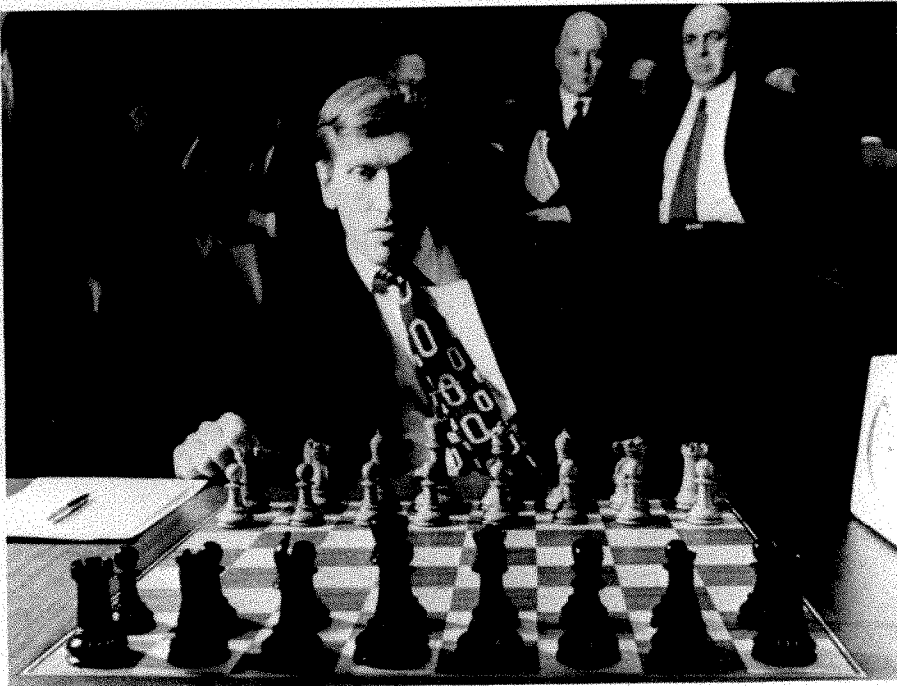
No aesthetician or creator has been able to explain these strokes of genius, but there it is—that combination of logic plus intuition leading to a *coup de maître* that stands in unflawed perfection. Thus it was with Mozart when he wrote those frightening D minor scales in the *Don Giovanni* Overture, and with Einstein when he formulated the most famous equation of the century. And thus it was with Fischer in his game with U.S. grandmaster Paul Benko in 1963 when he came up with R-B6 for his 19th move: a profound yet witty conception that lesser minds could not begin to conceive. The confounded Benko looked, gulped, knew he was dead, and resigned two moves later.

Is it the height of impertinence to place Fischer's 19. R-B6 alongside *Don Giovanni* and $E=mc^2$? On the ultimate scale, yes; but basically in that game Bobby was doing much what Mozart and Einstein were doing—carrying a set of premises to a thrilling and unexpected conclusion. In the process he was creating something beautiful, something that makes the mind glow when contemplating the sheer elegance and rightness of the conception. If chess were as popular as music, if as many people responded to its subtleties and nuances, the masterpieces of Steinitz, Capablanca, Alekhine, Botvinnik, and Fischer would not be held far below the masterpieces of Bach, Mozart, Beethoven, and Brahms. The creative imaginations that go into a great chess game and a great piece of music are closely allied.

Chess, like music, is not a game. It is a way of life that on its highest level demands as much application as, say, professional piano playing. The professional pianist spends six or more hours in daily practice, to the point where it becomes obsessive. Chess players go through a comparable routine, spending hours every day analyzing and studying, reading annotated games published in magazines all over the world. For them, standard reference books are *Modern Chess Openings* and *Chess Openings: Theory and Practice*, both 700-plus pages of close-packed print. They know these pages as well as a pianist knows the Chopin etudes and the Bach *Well-tempered Clavier*. And, like musicians, chess players have extraordinary memories—in their field. The memory does not seem to carry over into other things.

The Advantage of Youth

The best chess is generally played by men under thirty. Chess is a young man's game for physiological reasons, among others. Older people find it harder and harder to memorize, conceptualize, and assimilate. They find themselves prey to hungry kids up on the latest theory. There also is the matter of body conditioning. Yes, body conditioning. It takes a sturdy body to stand up to the rigors of tournament play—those five-hour sessions of concentrated brain-boiling—of playing off adjourned games the next day, of going without sleep while the mind



"possibilities hidden to less refined minds"

races through variation after variation. If A, then B, but perhaps also C, D, or E.... The pure intellectual effort of staring at a chess board without being able to touch it, trying to capture all possibilities and future situations, is brainwork on a rarefied level. Geniuses at the game see two or three moves ahead in all variations. Stories of a player thinking ten moves ahead (except in special situations where moves are forced) are part of the fables of mankind. It is impossible. The mental strain of planning two or three moves ahead is more than most players can take, and there is a heavy drain on the body in the process.

In the December 1971 issue of *Chess Life and Review*, there was a study of physiological changes during tournament chess. Breathing rate was up, systolic blood pressure substantially increased. "We believe," said the report, prepared by Charlotte Leedy and Dr. Leroy Dubeck, "that the much greater tension associated with the Candidates Matches caused the blood pressure for Fischer's opponents to remain elevated for *days* after the end of a given game." It is pertinent to note that each of Fischer's last four opponents postponed one or more games because of illness resulting from nervous strain.

Most chess players actually go into training before a big match. Bobby Fischer swims, plays tennis and ping-pong, gets plenty of fresh air. The Yugoslavian team goes to tournaments with a trainer and a portable sauna. Every day the members engage in weight lifting, push-ups, and shadowboxing.

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Then there is the matter of time pressure, and that can tear a player's nerves to shreds. In major tournaments each player has two and a half hours to complete forty moves. He can spend as much time as he wants on any given move, but if he exceeds the time limit of the game without completing his forty, the flag of his clock drops and he loses by forfeit even if he is in a position to mate on the move. Some players find themselves in constant time pressure. They think and think, and put themselves in a position where they have, say, only ten minutes to make twenty moves. Many a won position has been lost under time pressure. Bobby, incidentally, is almost always ahead of the clock, and seldom does he find himself in time pressure. It is his opponent who generally has to play the last sequence of moves with one eye on the clock as the minute hand approaches the moment of doom.

An Art and a Science

Bobby considers chess a combination of art and science. It is a science, he says, in that chess operates on certain unalterable principles or "laws." Art enters into it when the opponent miscalculates "and you can take advantage of it in an artistic way." To Bobby, chess is Idea, pure Idea, rooted in certain scientific basics of play, and he pursues that Idea to the exclusion of everything else. Only Alekhine, among the immortal players, had this kind of monomaniacal determination and will to win. Alekhine was never without a pocket set, and his nose was never far from the pieces. After a London tournament in 1922, the Soviet expatriate and the happy-go-lucky Capablanca were taken to a revue. Capablanca never took his eyes off the chorus girls. Alekhine never removed his eyes from a pocket set. Fischer is like Alekhine. A good time and chess do not mix. Girls and chess do not mix. Nothing counts but winning. Bobby from the beginning *had* to win. He will go on fighting in apparently drawn positions until the board is almost bare, willing to outsit his opponent for over a hundred moves if need be.

With the world title come fame and wealth. But those who know anything about Bobby Fischer say that fame and wealth will make no difference to the way he operates. For him the *raison d'être* of life has always been, and will continue to be, the creation of masterpieces on the chessboard. There always will be the vision of the unflawed game, the staggering combination, the transcendent Idea, the magical win in a rook-and-pawn ending that would be a loss for anybody else. Bobby Fischer may be an emotionally immature, even maladjusted young man, but in his way he is a supreme artist who seeks ideas of order in his own medium. Few artists have come as close to perfection.

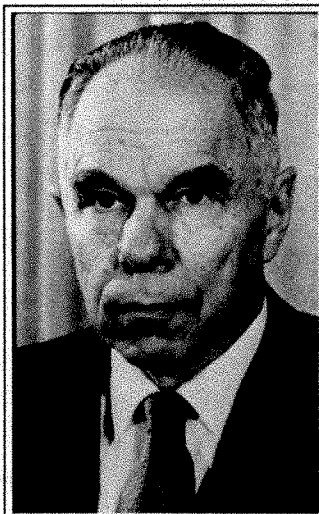
Nuclear Power: Two Views

1. AN ANSWER TO ENERGY NEEDS

By Glenn T. Seaborg

Many environmentalists oppose any expansion of power resources—and in particular, nuclear power plants—on the grounds that this would add to the already serious pollution of air and water. Dr. Seaborg here argues that theirs is a narrow and mistaken view, that more power will be needed to stop pollution, and that nuclear power is safer and less destructive of natural resources than more conventional sources of energy. His article is abridged, with permission, from the *Bulletin of the Atomic Scientists*.

Glenn T. Seaborg won the Nobel Prize in chemistry in 1951 for his work with fissionable isotopes. He is the co-discoverer of plutonium and other radioactive elements. He served as chairman of the U.S. Atomic Energy Commission for ten years, then in 1971 returned to the University of California in Berkeley where he was named University Professor of Chemistry, the most distinguished rank of professorship. His books include *The Transuranium Elements*, *Elements of the Universe*, and *Education and the Atom*.



The peaceful atom—and nuclear power in particular—is a subject on many minds today, and as is true with important subjects has its share of critics. In many respects I find this a healthy sign. The public has a big stake in something as vital as the supply of power and how that supply is to be achieved in the healthiest and most environmentally sound manner. Therefore I want to deal with three questions that relate to the so-called “nuclear power controversy.” They are: Do we need all that power? If so, why should it be nuclear? If nuclear, can we have it safely?

The question “do we need all that power?” is fundamental to the environmental thinking characterized by one rather questionable slogan: “All power pollutes.” It is unfortunate that often people who are rightfully concerned with the environment have a one-sided outlook regarding the use of energy. They have been conditioned, because of man’s abusive use of some energy, to believe that an energy-intensive

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society such as we have today in advanced nations must inevitably "self-destruct." A limited view of history has hypnotized them into seeing energy only in terms of a means of ruthlessly extracting resources from nature, using them foolishly (and often unjustly), and then dumping them back into nature in amounts and places where she cannot handle them. The immediate reaction to all this is simply—stop it! Use less power to produce fewer products to cause less pollution and we will all be better off.

But while there is always much to be said in favor of economizing and improving efficiency, offering that approach as a panacea is unrealistic and unimaginative. While we should not use the possibility of abundant energy as an excuse to try to support runaway population growth or ludicrous per capita consumption, neither should we believe that a power growth moratorium holds the solution to these social and economic problems. Changes in rational goals, public attitudes and private life styles may reduce the rate of growth of our energy consumption, but those who believe we can reduce our total energy consumption fail to take into account three things:

1. We are going to have a significant increase in population over the next few decades, even if we are successful in our population control effort.
2. The basic physical needs—and hence basic energy demands—of that population will be enormous because we are in the midst of a social revolution that will inevitably raise the standard of living for the world's underprivileged peoples.
3. Vast amounts of energy—needed by energy-intensive industries—hold the key to saving, not destroying, the environment as we grow to meet the human demands ahead.

The basis for this last claim is that, properly used, energy can create materials that substitute for the massive consumption of "natural" materials; that with new technologies—and intelligent, far-sighted planning—it can do so with less impact on less land; and that it can be used to conserve vast quantities of natural resources while allowing us to return to nature a minimum of waste in its most acceptable form. Much of this has to do, of course, with recycling.

Synthetic vs. Natural Materials

We are now into the beginning of what might be called a "Recycle Revolution." I believe it may be the most significant step man has taken since he initiated the Age of Steam. But recycling involves far more than composting leftovers, stacking newspapers or returning empty bottles and cans. The new and proposed recycle plants are large technical facilities requiring considerable amounts of power. The same is true of municipal sewage treatment plants, waterworks, and most pollution abatement facilities in the new and growing business of

1. An Answer to Energy Needs

environmental control. It is simply a law of physics that to change the form and location of matter you must use energy.

Today's outspoken ecologists claim that many of the "synthetic" products we use are environmentally undesirable because they require a large consumption of energy to produce. Among the modern industries that some ecologists have criticized as being energy-intensive are synthetic textiles, cement, aluminum and plastics. But the extra energy used to produce these materials must be considered in terms of its trade-off for other environmental demands. For example, all these materials replace natural fibers and wood in a variety of ways. If we were to declare a moratorium on their use and return to using only their "natural substitute," think what an additional demand this would make on the forests and uncultivated areas we prize as natural preserves and recreational land. There are numerous other examples.

This is not a defense of the desecration that has been caused by the abusive and thoughtless use of abundant energy. No one denies that this has taken place, and we can still see it taking place now even as we are beginning to fight against it. But the problem today is that we are "hooked" on this historical hindsight in which we cannot—or refuse to—see that new, less destructive and more creative ways of generating and using large amounts of energy are possible, among them nuclear power.

Future Power Demands

We must face the fact that to a growing extent electricity is the lifeblood of modern civilization. We may be able, to *some* degree, to improve efficiency in generating electricity and reduce waste in using it, but we now have a projection that over the next 30 years electricity demand will grow sixfold.

A large portion of the additional electric power requirements that we will see in the future will be caused by a shift from other energy sources to the use of electricity to fulfill basic needs such as heating and cooling, industrial processing and transportation. In most cases the shift will be away from energy sources far less desirable from an environmental standpoint. Abundant, economic electricity also can help industry and transportation introduce systems that are inherently less polluting—such as the electric steel furnace, which serves the additional environmental function of making the recycle of automobile scrap more economic. We must also recognize that it is much easier to exercise environmental controls over a centralized source of power, such as an electric generating station, than over a million individual fires, whether they are in homes, industrial plants or auto engines.

To meet future power demands there is no doubt that a great number of large central station steam-generating plants will have to be built and operated. We can explore and develop other possibilities to some extent. In certain areas we may be able to harness enough geothermal

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heat to meet some regional power demands. At a few coastal points we may be able to make some limited use of tidal power. And there may be some places where we could reliably collect and concentrate enough solar energy to meet local needs. But to believe that it is feasible—technically, economically or environmentally—to develop these energy sources to supply most of the huge additional electric generating capacity required in the years ahead is sheer folly.

The Limits of Fossil Fuels

Man has consumed more energy in the last 30 years than in all previous human history. Almost all that energy has been consumed in the burning of nonrenewable fossil fuels — coal, oil and gas produced by nature over the course of millions of years. We are rapidly depleting the remaining recoverable supplies of these resources. By simply setting a match to these irreplaceable materials to make electricity, we are doing more than consuming their energy. We are destroying materials essential to transportation—both as fuels and lubricants—and essential as a source of chemicals to a growing number of industries. We are also accepting the inevitability of great increases in air pollution—a health hazard which is already approaching disastrous proportions in some areas.

Few people realize that if we seek to reduce pollution and congestion in cities by substituting electric-powered mass transit systems for private gasoline-powered automobiles, we will have a large new demand for electricity. If we were to make the transition in major urban areas throughout the United States to the use of electric automobiles, as well as electric mass transit systems, we would require tens of billions of additional kilowatt-hours of electricity annually. This, of course, would offer a tremendous reduction in air pollution in terms of today's effects of internal combustion engines, which are responsible for a significant portion of urban air pollution. But how foolish it would be to generate all this electricity by burning fossil fuels—by substituting one form of pollution with another. Nuclear power will be essential to help handle this added capacity in an environmentally sound manner.

Americans must also look beyond their own borders to anticipate the problem of burning all the world's fossil fuels. We in this country, with all our energy demands to support our high standard of living, are drawing large amounts of energy and mineral resources from other parts of the world. With rising expectations in those areas and increased technological capacity to fulfill those expectations there will be growing pressure to change this situation. International competition for these resources will grow more intense. Developing nations will begin to need more of their indigenous supplies. And they will also want to be less dependent on other countries for certain vital materials.

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This could have several implications: Nations that have natural energy resources might want to export less and use more domestically. The other nations, including our own, in that event would have to expend more energy to extract such minerals from lower grade ores, recycle these scarcer materials or produce substitutes. In some areas of the world such new needs for energy would encourage a turning to nuclear power that, once installed, offers a nation some independence from the problems of day-to-day fuel supply and in the future would offer both economic and environmental advantages as well.

How Safe Is Nuclear Power?

Now let's take a look directly at nuclear power, particularly at those aspects of it that are so much on people's minds, namely the questions of its safety and environmental impact. Our sudden awareness of our ecological problems has made us—and perhaps rightfully so—what might best be described as “environmentally uptight.” Today almost any new technology or product is eyed suspiciously, and if anyone casts any doubts upon its short or long-term effects or side effects the tendency is to stamp it “guilty until proven innocent.” Nuclear power is in this position and suffers doubly because of its indirect military association. But in the case of nuclear power, anyone who is willing to examine it without prejudice and objectively will be convinced of the following.

The nuclear industry is high among the safest industries in America. Years of National Safety Council records prove this conclusively. Nuclear power plants that have been licensed for operation in the United States to date have accumulated more than 100 reactor-years of safe operation without an accident affecting the public. Furthermore, another 780 reactor-years of operating experience without a reactor accident have been provided by the U.S. Nuclear Navy.

Those who try to equate proportionately the environmental effects and potential hazards of the newer large nuclear plants with their older smaller predecessors simply do not understand today's dynamic nuclear technology. The newer plants are not merely exact scale-ups of the older ones with equally scaled-up effects and risks. They have benefits of improved technology, of innovations in environmental and safety controls, and of better quality control. Furthermore, they are subject to more stringent regulation and more sophisticated monitoring.

What about the environmental effects of nuclear power, particularly the release of radioactivity in effluents to the environment? Growing environmental concern, during recent years, has understandably included the specific concern that the use of nuclear energy to supply projected demands for electric power may result in large exposures of the population to radiation. Operating experience with nuclear power reactors to date should certainly help to dispel concern over radiation exposure. Estimates, based on levels of radioactivity at nuclear power

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sites, show that average radiation exposures to the U.S. population from this source is presently one-thousandth (0.001) of a millirem per year.

The present state of technology is such that people living near nuclear power plants which meet the regulatory requirements of the U.S. Atomic Energy Commission would face radiation exposures amounting generally to only a small fraction of the exposures they receive from natural background radiation. Even in the year 2000, the estimated U.S. figure for the whole body exposure per capita per year—from radioactivity in effluents released from nuclear power plants and chemical reprocessing plants during normal operation—would average less than one millirem. In comparison, average annual exposures to the U.S. population from natural background radiation is currently about 125 times as great.

It is evident that the concern of some critics over possible health hazards from nuclear power is unwarranted. In fact, death and disease indirectly attributed to the generation of power from all sources should *decrease* considerably as nuclear power assumes a major portion of that burden—as we are able to reduce the known adverse effects of air pollution by a shift toward nuclear generated electricity and by applying pollution controls to fossil-fueled plants.

Looking Toward the Year 2000

In view of all this let me conclude with a few of my own projections on nuclear power. Since the year 2000 seems to be a date toward which many modern cynics look with great trepidation, let me use that as the focal point of these projections.

By the year 2000 we will see about 1,000 million kilowatts of electricity generated by about 1,000 nuclear power reactors, sharing about half of America's power load, with highly improved fossil-fueled plants carrying the other half. Of these 1,000 nuclear facilities, perhaps half will be powered by fast breeder reactors, a number of which will have been in operation long enough to produce sufficient new fuel to refuel themselves and an equal number of other reactors.

As I have previously indicated, the annual average whole body radiation exposure to the U.S. population resulting from the release of radioactivity to the environment from the normal operation of all nuclear power plants in the year 2000 will be less than one millirem—or equivalent to less than one per cent of the radiation exposure to the population from natural background radiation. And the plants emitting this negligible radiation will be indirectly responsible for a reduction of billions of tons of carbon dioxide, millions of tons of sulphur dioxide, and large quantities of oxides of nitrogen and particulate matter that would then be coming each year from fossil-fueled plants—even those built or back-fitted with pollution controls—if we continued to rely

1. *An Answer to Energy Needs*

solely on such plants for the bulk of our electricity.

Long before the year 2000, it will have become routine for the high-level waste produced in reprocessing fuel from these plants to be converted to solids, and buried or stored where it cannot reach the biosphere. Located according to a national electric power siting plan, and equipped with the latest cooling technologies, these nuclear plants will not be permitted to produce harmful thermal effects on their local environment. And the waste heat from many of them will be diverted to beneficial uses. By the year 2000 we will also have seen the successful control of thermonuclear fusion, and perhaps the first full-scale fusion demonstration plant in operation.

Realistically, some accidents and failures can be expected among all these plants. No technology, no matter how excellent the engineering, construction and regulation, can guarantee 100 per cent reliability or safety. But I can say with confidence that the chances of such accidents seriously affecting lives or property beyond the plant boundary are extremely low. Furthermore, I believe that in the decades ahead nuclear power will show such impressive safety statistics that the insurance industry will be among the biggest investors in nuclear power.

Man must learn to live with his new-found technological capacity and live up to the new responsibilities it brings, not merely because it is here, but because developed and applied wisely it will help him achieve his most human goals. For this reason we must strive to understand and work intelligently and cooperatively with the peaceful atom. To turn our backs in ignorance and fear on this potentially great force for global good would be a failure that future generations would never forgive.



Nuclear Power: Two Views

2. THE HAZARDS OF NUCLEAR POWER

By Allen L. Hammond



Many scientists agree with Dr. Glenn Seaborg, former head of the U.S. Atomic Energy Commission, that the most promising future source of energy is nuclear power. Other scientists, like the author, argue that the case for nuclear energy has not yet been proved. In the following article, abridged from the January 1973 issue of *Harper's Magazine*, Dr. Hammond outlines some of the dangers that may confront a breeder reactor program.

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At one time, Americans obtained ample energy with a technology no more sophisticated than an ax. Now we depend increasingly on electricity generated in central power stations—most of them fueled by coal, with its side effects of air pollution and strip-mine damage. The United States also has 25 uranium-fueled nuclear power plants; many more are under construction. But neither coal nor uranium can supply our energy needs indefinitely. Uranium particularly is in short supply; according to the Atomic Energy Commission (AEC), reserves of this fuel will run low within 20 or 30 years. Ultimately we will have to develop other fuels and still more sophisticated technologies to power our industries and light our homes. Worse, the U.S. demand for electric power is likely to double twice by 1990, creating a genuine energy crisis.

How we should marshal our resources to meet our energy needs is a controversial subject. Some years ago, the Atomic Energy Commission decided unilaterally that our highest priority should be the breeder reactor, a new and complex type of nuclear reactor that will burn plutonium instead of uranium. The breeder has the almost magical

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ability to produce, or "breed," more nuclear fuel than it consumes, and it will, the AEC claims, provide cheap, abundant electric power with less pollution than uranium-fueled reactors. By the year 2000, the AEC plans to have in operation more than 500 breeder reactors, representing a quarter of this country's electrical generating capacity.

In contrast, the breeder's critics argue that it will lead to unprecedented environmental hazards. Far from being an ideal solution to the energy dilemma, they believe, the breeder may well be the worst of the alternatives at hand. Physicist and Nobel laureate Hannes Alfvén claims that with this technology, "a total poisoning of the planet is possible." Even some thoughtful proponents of the breeder have pointed out that large-scale use of these reactors will pose novel difficulties arising from their production of vast amounts of radioactive plutonium, a long-lived and extremely lethal material. There is a "moral responsibility" to face up to such potential dangers, says Alvin Weinberg, director of the AEC's Oak Ridge National Laboratory. If the dangers are as great as the critics claim, it would seem reasonable to devote more resources to cleaning up fossil fuels (coal, oil) and to developing less hazardous sources of energy, such as nuclear fusion, solar energy, or geothermal energy, instead of building breeder reactors.

How Breeder Reactors Work

But what in fact are the dangers of the breeder reactor? Is the breeder another irresponsible adventure in technology? Or is it, as the AEC claims, the only feasible alternative we have? Before we examine the arguments for these conflicting points of view, we need to know something about how breeder reactors work, and how they differ from the type of nuclear power plant that is now being built around the country.

Nuclear reactors exploit the process of nuclear fission—the splitting of the atom. The heat produced in this process is in turn used to generate electricity in nuclear power plants. Only a few natural substances readily undergo fission, however, and the most common of these, uranium-235, constitutes less than 1 percent of the uranium found in nature. Commercially recoverable reserves of fissionable materials are limited; hence nuclear reactor fuel will eventually be in short supply—exactly when depends on the extent of the deposits of high-grade uranium ore. A possible solution to this impending shortage is to have nuclear reactors artificially breed new fuel for themselves by converting "fertile" materials, such as the more plentiful uranium-238 and the element thorium, into fissionable materials such as plutonium; for this reason the breeding has been of interest since the early days of nuclear energy.

Nuclear reactors of the kind now being installed in power plants breed small amounts of new fuel, but the conversion process is relatively inefficient, producing only about 60 atoms of plutonium

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for every 100 atoms of uranium consumed. Breeder reactors, as their name implies, are more efficient at the conversion process, and produce more nuclear fuel than they consume. The resulting plutonium can be used as a fissionable fuel in a breeder to produce still more plutonium, thus doubling the plutonium on hand about every 10 years. If AEC projections for the commercial use of breeders prove correct, these reactors will be producing as much as 80,000 kilograms of plutonium a year by the end of the century.

Such large quantities of plutonium, according to the AEC point of view, represent a distinct benefit to mankind. As fuel in a nuclear reactor, for example, a pound of plutonium can produce as much energy as three million pounds of coal. By using plutonium instead of fissionable uranium as a nuclear fuel, we will extend our energy resources and obviate the need for costly separation facilities to process the uranium. As a result, the AEC claims, plutonium constitutes an almost inexhaustible fuel.

Debate over Plutonium

But plutonium is also among the most toxic substances known to man. Experiments have shown that trace amounts induce lung cancer in animals. Federal health standards recommend no more than 0.6 microgram (about twenty billionths of an ounce) as the total amount to which a human body should be exposed. Because plutonium combines readily with oxygen, there is a substantial fire hazard wherever this material is used. The critical mass of plutonium, the amount that could cause a nuclear explosion, is only a few kilograms, thus requiring unusual care in handling, storing, and shipping to prevent such quantities from coming together. Not the least of the problems posed by plutonium is its radioactivity; the radioactive half-life, or decay period, of plutonium is about 24,000 years, so that the contamination of an environment with plutonium by whatever means would be essentially permanent. Both the projected scope of plutonium usage—what former AEC chairman Glenn Seaborg has optimistically described as the “plutonium economy of the future”—and the hazards associated with this valuable yet dangerous material make the debate over the merits of the breeder a significant one.

The AEC is confident that dependence on plutonium fuel will present no irremediable difficulties; its top officials are apparently unwavering in their belief that the breeder is the best solution to our energy problems. But this conviction and the AEC's case for the breeder seem to depend on the tacit assumption that some form of nuclear energy is inevitable. In essence, the AEC's arguments are threefold: (1) we must have the breeder and have it quickly, if we are to continue to enjoy the benefits of nuclear energy; (2) breeders will make available abundant and inexpensive electric power; and

2. The Hazards of Nuclear Power

(3) the plutonium problems notwithstanding, the AEC claims that the breeder will pollute less than other sources of energy.

The first argument is essentially a scarcity argument. AEC estimates of commercially recoverable uranium indicate a shortage of nuclear fuel before the end of the century if breeders are not built. Because it will take 15 to 20 years to develop breeder reactors and perfect them to the point of commercial acceptability, the AEC reasons, it is urgent to move ahead rapidly if the energy crisis is to be staved off.

There is indeed no question that, in the long run, breeder reactors will be necessary if we continue to use nuclear fission as a source of energy. But there is disagreement about whether we have 15 or 50 years before this necessity must be faced and choices made. The AEC's estimates of uranium assume, for example, that no new discoveries of uranium ore will be made, that no more drilling (to verify suspected deposits) will be done, and that no uranium will be imported from Canada and Australia, where most of the free world's reserves of this mineral are located. Independent studies of uranium reserves have questioned the AEC's findings, and have indicated that sufficient domestic supplies of high-grade ore exist to fuel the growing nuclear industry through at least the year 2020 without recourse to breeders. The point is not that breeders should never be built but that, if these independent studies are correct, there is no justification for a crash program to develop breeders. We could then have enough time to make an informed and rational choice.

Economic and Environmental Effects

What about the argument that breeder reactors have economic advantages as a source of power? The AEC claims, as justification for federal investment in breeders, that the introduction of this technology might save as much as \$20 billion in the nation's power bill over a 50-year period. Several nuclear experts who have looked closely at the design to which the AEC is committed are dubious that the breeder will in fact perform as economically as claimed. A recent study by Resources for the Future, a reputable nonprofit group in Washington, D.C., indicated that the breeder is likely to be a far more expensive source of electricity than present nuclear power plants. The relative attractiveness of the breeder will also depend in part on the effort and money expended to develop and improve other sources of energy.

The AEC's third argument is an environmental one: breeders will eliminate the air pollution that fossil fuel plants would cause; they will reduce waste heat and thermal pollution compared to present types of nuclear power plants; and they will further reduce the release of trace amounts of radioactivity into the environment. These are substantial advantages, taken one reactor or power plant at a time, but they do not give the entire picture. The large number of breeder reactors

that the AEC envisions will make the issues of reactor safety, the transport of nuclear fuel, and the disposal of the radioactive waste products of reactors much more serious questions than they are at present.

The Problem of Safety

Reactor safety, for example, is not something that can be absolutely guaranteed. Nuclear power plants are probably among the most carefully engineered and rigidly regulated structures in the world. Allowances are made even for unlikely events; near airports, these plants must be designed to withstand an airplane crash without releasing substantial amounts of radioactivity. But even the most conservatively designed and carefully run industrial facilities do have accidents. The possibility of unforeseen natural disasters, war, or sabotage cannot be ruled out. While the chances of a serious nuclear accident may be exceedingly small at a given plant, the net probability will be considerably increased when several thousand breeder reactors are in operation.

At regular intervals, nuclear reactors must be refueled, and the fission waste products and plutonium removed and shipped to a fuel reprocessing plant. The radioactive waste is then to be shipped to a depository for long-term storage, while the plutonium is refabricated into reactor fuel and shipped back to a nuclear power plant. Transportation accidents occur with predictable frequency; railway cars, for example, are derailed about once every million miles. By the year 2000, there will be as many as 600 shipments of highly radioactive fuel per week, so that we can expect a certain number of accidents in which radiation is released. This number will probably be very small, but that is not the point—there will be some accidents. One is forced, as with the possibility of reactor accidents, to make unpleasant decisions about what risk, in terms of human exposure to radiation and contamination of the environment, we are prepared to tolerate as the price for power from the breeder.

Long-term storage of radioactive wastes is a problem the AEC has still not adequately solved. According to current projections, more than 10 million gallons (or their solid equivalent) of such wastes will have accumulated by the end of the century. These toxic materials must be cared for over many thousands of years. We shall have to build or find repositories that, like the pyramids, will outlast our present culture as monuments to our use of nuclear energy.

To be sure, technological problems are amenable to solution, at least in theory. But the same cannot be said for the social problems created by technology and human nature. Airplane hijacking is one example. The diversion of plutonium to illegal purposes may well be another. Plutonium is extremely valuable as nuclear fuel and is worth about \$10,000 per kilogram—comparable to the wholesale price of heroin and

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about 10 times the value of gold. Given this incentive and the relative ease of truck hijacking or of stealing in small amounts from industrial stockpiles, it seems likely that a black market for plutonium will develop, an assessment with which the AEC's own experts agree. Moreover, it takes only a few kilograms of plutonium to make an atomic bomb, and the know-how to construct such a bomb is readily available. One can imagine, without too much difficulty, an extremist group of the future demanding an enormous price in return for not blowing up New York City. Even without bombs, the public health and national security hazards of a clandestine plutonium market will be considerable.

Despite a distinct resemblance to science fiction, these are not hypothetical problems. Hence our central dilemma. The future of nuclear energy depends on breeders, yet the widespread use of this technology may pose unacceptable costs in environmental damage, health hazards, and social chaos.

What alternatives to the breeder do we have—or might we have if we committed as many resources to their development as to the breeder? In the short run it would be to our advantage as a society to decrease our use of electric energy if we can, but there is no easy way to legislate the ever-rising demand for power. Improvements in the way we use fossil fuels are possible and may represent a good social investment for the immediate future, but fossil-fuel reserves will run out eventually, probably within a few centuries.

Other Sources of Energy

On a longer time scale, the only sources of energy for mankind will be nuclear fission (i.e., the breeder), nuclear fusion, solar energy, and geothermal energy. Methods of capturing sunlight and converting this energy to heat or electricity look promising, but it is uncertain how much these methods will cost. Similar statements can be made about the prospects of tapping the geothermal heat below the earth's surface. The process of nuclear fusion, in which isotopes of hydrogen combine to form helium and release large amounts of energy, also has high potential, but it has not yet been shown that controlled fusion can be made to work, let alone that it can be economically competitive. Given the problems associated with large numbers of breeder reactors, however, we might be well advised as a society to find out more about these options, which are currently being investigated on a meager scale compared to breeder development.

Thanks to the AEC's years of effort, the breeder reactor is now the most advanced of our alternatives for a future source of energy. Other countries, including the Soviet Union, Great Britain, Germany, and Japan, have also committed themselves to building breeder reactors. Many nuclear experts agree with President Nixon's view that the United States should not lag behind in exploiting this new technology.

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But the energy dilemma is a novel problem for mankind. The human race has never before had to make long-range decisions about its future of comparable magnitude to those we now face. It is not easy to dismiss the view that, among our energy options, the breeder ought to be "the last choice of a desperate nation," as some critics believe. Under the circumstances, it would be irresponsible to rush ahead without careful study and public debate; we would be unwise to barter our long-term future for short-term gain, whether political, economic, or environmental.

It may be that breeder reactors are the best or even the only feasible source of energy for mankind. It may be that the complexities associated with large inventories of plutonium are part of the price of living in a technological society. But it would be well to be sure before the enterprise is too far advanced and the cost of error too high.



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SOME WOMEN IN AMERICAN POETRY

By Josephine Jacobsen

A noted women poet examines the special "pressures and permissions" that American women poets have had to overcome, or take advantage of, from Anne Bradstreet in the 17th century through Emily Dickinson in the 19th to Marianne Moore in the 20th. Her article is excerpted from a lecture delivered at the Library of Congress.

Josephine Jacobsen served as consultant in poetry to the Library of Congress from 1971 to 1973, and is now one of the Library's ten honorary consultants in American Letters. Primarily a poet, she has also written short stories and literary criticism. Her books include four volumes of poetry and three works of criticism on the writings of Samuel Beckett, Jean Genet, and Eugène Ionesco. Her latest book, *New and Selected Poems*, is scheduled for publication by Doubleday in 1974.



It is not my intention to present a chronological survey of the women poets of America. I want rather to look at the atmosphere in which they worked, to attempt to understand a little of its pressures and permissions; and I hope that in some mysterious way I may manage to combine elements of the involved and of the objective. As an American woman poet, I can scarcely fail to be involved, but it is the poetry, not the nationality or the sex, which finally matters. In this whole question, there is a delicate balance between ignoring the question of power and powerlessness, and making social and human problems, instead of the poetry, the center of attention.

Anne Bradstreet, the only poet of creative stature with the exception of Edward Taylor in the colonial period of American literature, was well aware of the hostile reaction to her writing poetry at all. She wrote, with considerable bluntness, in "The Prologue":

I am obnoxious to each carping tongue
Who says my hand a needle better fits,
A poet's pen all scorn I should thus wrong,
For such despite they cast on female wits:
If what I do prove well, it won't advance.
They'll say it's stol'n, or else it was by chance.

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That is an undermining atmosphere. This reaction, of course, was not entirely limited to women. In *100 American Poems* Selden Rodman quotes a letter which Herman Melville's wife wrote to her mother in 1859: "Herman has taken to writing poetry. You need not tell anyone for you know such things get around." The distinction, however, remains in the fact that men were not supposed to write poetry because it was unsuitable, since they had things of authority and importance to do. Women were not supposed to write poetry because buttons would stay missing and meals be late, not to mention the degradation of morals!

The American women writing poetry in the 18th century do seem to have been genuinely and often passionately involved in writing as a form of good works. It is a sobering instruction to see how poorly such verse, widely acclaimed for its propaganda value in the interest of excellent causes, has withstood the test of time. In our day there are poems by Josephine Miles, Denise Levertov, and Adrienne Rich good enough to give the lie to the generalization that poetry with an object is, *per se*, bad poetry; but the winnowing-out has been, in the long view, usually pitiless to the poetry of polemics.

Secret Strivings

What were the chief elements in the attitudes of American women poets in the long desert stretching between Anne Bradstreet in the 1660's and Emily Dickinson in the 1860's? The chief elements—and this statement is less provocative than realistic—were those one might expect from a body of literate, highly privileged slaves. In general, life is seen as something to be endured; emotion as something foredoomed; death as a release, even for the young. Much of the poetry of any force deals with the idea of emotional escape—as indeed does so much of the later poetry of Emily Dickinson. In a period when, out of a family of 14 or 15 children, five or six might well die in infancy or early childhood, death as an omnipresent reality was a towering presence. The constants in the lives of women poets in the first hundred and fifty years on this continent were endurance, faith (often less as a conviction than as a desperate refuge), and a courage that was less ardent than fatalistic. When Louise Imogen Guiney, an uneven but much underrated poet, later wrote in "The Kings,"

The terrible Kings are on me,
.....
Mind's Doubt and Bodily Pain,
And pallid Thirst of the Spirit
That is kin to the other twain...

she was echoing her predecessors. Expressed agnosticism, in a woman, would have been as unseemly (and this is the point) as a talent for wrestling; so that whatever agonies of doubt the events of their lives

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might induce must be met and vanquished—or not—in secret.

It would be naive in the extreme to imagine that women poets accepted the innate superiority of men as mentors or artists without inner questioning, but for the most part, any overt caviling took the form of the lightest of mockery. Hannah Parker Kimball's "One Way of Trusting" is typical of a sort of graceful disillusionment and more than typical of its period:

Not trust you, dear? Nay, 't is not true.
As sailors trust the shifting sea
From day to day, so I trust you.
They know how smooth the sea can be;
And well they know its treachery
When tempests blow; yet forth they thrust
Their ships, as in security.
They trust it, dear, because they must.

Emily Dickinson: The Release of Emotion

In the long line that stretches from the bleak poetic environment of Anne Bradstreet to the complex 20th century surroundings of Marianne Moore, it is interesting, I think, to note certain resemblances between two of the finest American poets: Miss Moore herself and Emily Dickinson. Each was a spinster. Each lived uninvolved in the physical and emotional relationships which alter the daily circumstances of a wife or mother. Each had a fine quiddity which went its own way, owing nothing to the current poetic fashion. Marianne Moore, of course, lived a life enormously enriched by contacts with her peers, by access to other milieux, by her freedom from the rigid expectations of contemporaries. Emily Dickinson had a close kinship with her predecessors not only in her preoccupation with death, but in that same sense of suffocation, in the passionate need for an emotional breakthrough, which gives her work so many of its images.

Exultation is the going
Of an inland soul to sea,
Past the houses—past the headlands—
Into deep Eternity—

Bred as we, among the mountains,
Can the sailor understand
The divine intoxication
Of the first league out from land?

Marianne Moore: Poetry as Attention

Neither Dickinson nor Moore drew much of the matter of their poems from events and circumstantial changes in their own lives. Dickinson's came from within. Moore's, most of the time, from reading—reading

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of the odd, the particular, the out-of-the-way, the intricate. The overwhelming majority of her poems were drawn from bits of information which, like a sublime packrat, she carried off, only to return in their place a masterly poem. There has been much recent discussion of *attention as prayer*, and William Stafford has discussed *poetry as attention*. Observation, raised to a certain degree, is a kind of love.

Marianne Moore is the empress of observation. She *paid* attention—to use that wonderful, casual phrase—and the things to which she paid it rewarded her: the jerboa, the swan, a steeplejack, a scalpel, the weasel, steam rollers, mongooses, snails, racehorses, steel, granite, giraffes, baseball, and their qualities and uses. Her attention ran below the surface: how yarn is dyed, how the structure of a wing functions, how a steeple is gilded, how an octopus kills its prey with “concentric, crushing rigor.” A *man’s* eye for the accurate detail, Anne Bradstreet’s detractors would have said. But this sort of eye is notably shared in our day by May Swenson and by Elizabeth Bishop.

The Struggle for Selfhood

The liberation by art precedes the liberation by circumstance. By 1912, when an American woman, Harriet Monroe, was establishing a magazine, *Poetry*, which was to become perhaps the world’s leading journal of poetry, the entire paralyzing structure of the attitude toward women writers had begun to show cracks, and then gaps. In the first half of this century, no one could argue that Elinor Wylie or Edna St. Vincent Millay was forced into passive attitudes in the face of a masculine world. Yet, in the technical sense, they were still sports, and their response to life was often a sort of ricochet of their reaction to a masculine world. Millay, in particular, showed clearly a sort of midway struggle in the process of self-identification. A new note is sounded. This is not one of her best poems, but it is the perfect illustration of her simultaneous attack and insecurity.

I, being born a woman and distressed
By all the needs and notions of my kind,
Am urged by your propinquity to find
Your person fair, and feel a certain zest
To bear your body’s weight upon my breast:
So subtly is the fume of life designed,
To clarify the pulse and cloud the mind,
And leave me once again undone, possessed.

Think not for this, however, the poor treason
Of my stout blood against my staggering brain,
I shall remember you with love, or season
My scorn with pity,—let me make it plain:
I find this frenzy insufficient reason
For conversation when we meet again.

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That's a far cry, but it still assumes "the needs and notions" of a woman to be her Achilles heel. Miss Millay had the misfortune to be too often remembered by the tag-lines of her light verse, her shining palaces built on the sands and her candle flaming at each end. Her reputation is now in that trough between the adulation of her work when it was in vogue and the steady respect I believe it will be entitled to, in its finest forms.

What of the women poets of the present? Without for a moment blinking the fact that the scales are still heavily loaded in the world of everyday activity, it would be impossible, I think, to maintain the claim that women poets today have any limitation imposed upon their concepts, or the expression of those concepts. However, influences can be extremely subtle, and yet strong. Since the vast majority of women do not actually follow as many styles of life, move about in their environments in just the same way, experience the same physical and economic pressures as do men—to that extent, the material which comes naturally to their hand is more limited.

Yet when it comes to making bricks without straw, women have possessed an infinite and mysterious skill. More and more straw now becomes available. The poetry of women today does not show an overwhelming satisfaction with the quality of that straw. The poetry of Mona Van Duyn, Gwendolyn Brooks, Isabella Gardner, Adrienne Rich, Anne Sexton, Carolyn Kizer, is racked by the pressures and tensions of their wider experience. Julia Randall is one of the few who, more and more, show a quality of underlying radiance—a sort of receptive joy under the full recognition of suffering and even horror.

Freedom and Power

I believe that the incoming tide of good poetry by American women is going to expand and deepen, not steadily—poetry never works in that way—but erratically. It is not any security on the part of women which is going to cause this to happen. Poetry has small traffic with security. What *will* contribute is the sense of the freedom, and hence power, of the individual women (if realization of that status for women does not tragically coincide with the diminution of all of us, men and women alike)—the right of the human being who is a woman to act, and react, *as* an individual, as the sort of human creature she is, without being first and most important judged within the context of that constricting niche to which society has assigned her.

No group oppressed—and it is possible to speak of oppression, since the denial to any individual of the power within her human potential is certainly the earmark of oppression—no group oppressed ever frees itself or flowers without the traces of that oppression, without a shrillness, an aggressiveness, an infatuation with their own idiosyncracies, as though anything, to be interesting or valid, had only to belong to

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them. I think much of the extravagantly confessional kind of poetry written by women is caused in part by the desire to assert emotional, intellectual, and physical problems without that plastic covering of reticence and euphemism which was demanded by an earlier day. I remember Auden mentioning, in a poem which catalogs the sins for which men may or may not be forgiven, the assumption that "... 'Woman is naturally pure / Since she has no moustache' ..."

There have been some harsh descriptions of writers as such. Kenneth Rexroth, always a fast man with a sharp word, paints a fairly gruesome picture in *American Poetry in the Twentieth Century*:

By and large, writers are not very nice people. Most of them are quarrelsome, vindictive, malicious. There are too many piglets, and too little swill in the trough, so there is a good deal of squealing and backbiting. American writers have a fixed idea that they are not welcome in their society and this makes them arrogant.

However much this seems exaggerated, or indeed distorted, no writer would deny its kernel of truth. And if most of the best of the women poets seem curiously uninfected with the virus, it may be cynically argued that until fairly recently the trough was off limits, and they had formed a habit of doing without it. Yet I think it cause for pride that most of the good poetry being written by women has a largeness, a lack of pettiness, a reaching over barriers. To believe that the poetry of women has an especial quality is simply another way of saying that the feminine ethos has its own unique and pervasive quality to offer to the art of poetry.

If, in the 17th and 18th centuries, it was difficult for any woman poet fully to realize her talent, for the woman who was black the difficulty approximated an impossibility. No one can estimate what poetic creativity was smothered under the weight of forced illiteracy, isolation, and the sense of hopelessness. Someone like the distinguished black woman Sojourner Truth found her outlet in preaching. She was musical and eloquent; inevitably she functioned in the ways open to her, as singer, as evangelist. But at last in our time the poetry of black women is beginning to come into its own in the work of Gwendolyn Brooks, Nikki Giovanni, June Jordan, and others.

No Single Pattern

Can one say that now, in this period roughly coinciding with the end of Marianne Moore's career, there is a definite shape, a direction, an overriding pattern, as legacy in the work of American women poets? Definitely, one cannot.

Sylvia Plath's tragic, inward-turned work; Elizabeth Bishop's and May Swenson's marvelous observation and justice; Louise Bogan's

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real majesty; Isabella Gardner's highly charged and witty work, with its kinship to Millay; Josephine Miles' and Adrienne Rich's socially oriented work; Anne Sexton's passionate and dramatic self-analysis; June Jordan's or Nikki Giovanni's racial concern; Julia Randall's lyric and metaphysical radiance; Carolyn Kizer's cool, satiric, and highly feminine work—all have little to indicate to us of any future "trend." Interestingly enough, there does not seem to have been a great deal of acute interest in the more far-out forms of technical innovation among the majority of these poets. Never for a minute did they feel that the rupturing of form and structure alone could produce originality; nor did they lose sight of the fact that shock, and the recognition of its validity, comes about organically, within the poem.

I have been speaking as a poet and a woman. I would like to end by citing a poem of mine about that freedom of the poem itself from being anyone's possession, about that marvelous thing, escaped, which, since it belongs to no one, speaks to its own. That is what is left in the end.

The Poem Itself

From the ripe silence it exploded silently.
When the bright debris subsided
it was there.

Invisible, inaudible; only
the inky shapes betrayed it.
Betrayed, is the word.

Thence it moved into squalor,
a royal virgin in a brothel,
improbably whole.

It had its followers, pimps, even
its lovers. The man responsible
died, eventually.

When the dust of his brain left the bones
the bond snapped. It escaped to itself.
It no longer answered.

On the shelf, by the clock's tick, in the black
stacks of midnight: it is. A moon
to all its tide.

DELIGHTS AND DILEMMAS OF AN ECOLOGIST

By John J. McMahon

Aldo Leopold was one of the first to advocate the preservation of wilderness areas, untouched by human intervention, as a legacy to future generations of city people increasingly removed from contact with nature. Leopold worked for the U.S. Forest Service from 1909 to 1927, became president of the American Wildlife Society, and served as a conservation consultant to the United Nations until his death

in 1948. His by-now classic work, *The Sand County Almanac*, was reissued in 1973 by Oxford University Press.

John J. McMahon, who here reconsiders Leopold's book, is professor of philosophy and director of environmental studies at Marymount College in New York. His article is reprinted by permission of *The New Republic*.

Aldo Leopold's reminiscences of life on his farm in southern Wisconsin, first published in 1949, bespeak a love of nature that is straightforward and uncompromising. "There are some who can live without wild things," he says, "and some who cannot. These essays are the delights and dilemmas of one who cannot." The essays in his *Sand County Almanac* form, to my mind, the finest volume ever produced in the exceedingly rich genre of American nature writing. It never had a companion volume; its author died before it was published while fighting a grass fire on a neighbor's farm.

Leopold's legacy is in what he teaches us to see: "Tell me of what plant birthdays a man takes notice, and I shall tell you a good deal about his vocation, his hobbies, his hay fever, and the general level of his ecological education." Most of us see a three-dimensional nature whose beauty runs a truncated spectrum from cute kittens and flaming sunsets, to silvery lakes and pretty fall foliage. We are not really attuned to a nature in which "the only certain truth is that earth's creatures must suck hard, live fast, and die often, lest its losses exceed its gains."

Nor do we share Leopold's vision of two extra dimensions: the community of interdependence which provides the life-support system for every creature (ecology), and the rootedness in the past which gives its present characteristic form (evolution). A fallen tree, to Aldo Leopold, is not just a gnarled, brown, horizontal cylinder, but a succession of living environments, favorable to successions of host organisms, until the process comes full circle and the tree has once again become soil, paying back with interest all that it has taken from the earth. Similarly, an old bur oak is not just useful firewood, but for one with eyes to see, an index of 100 years of Wisconsin weather, 200 years of human land use and, beyond that, 15,000 years of the geological history of our northern

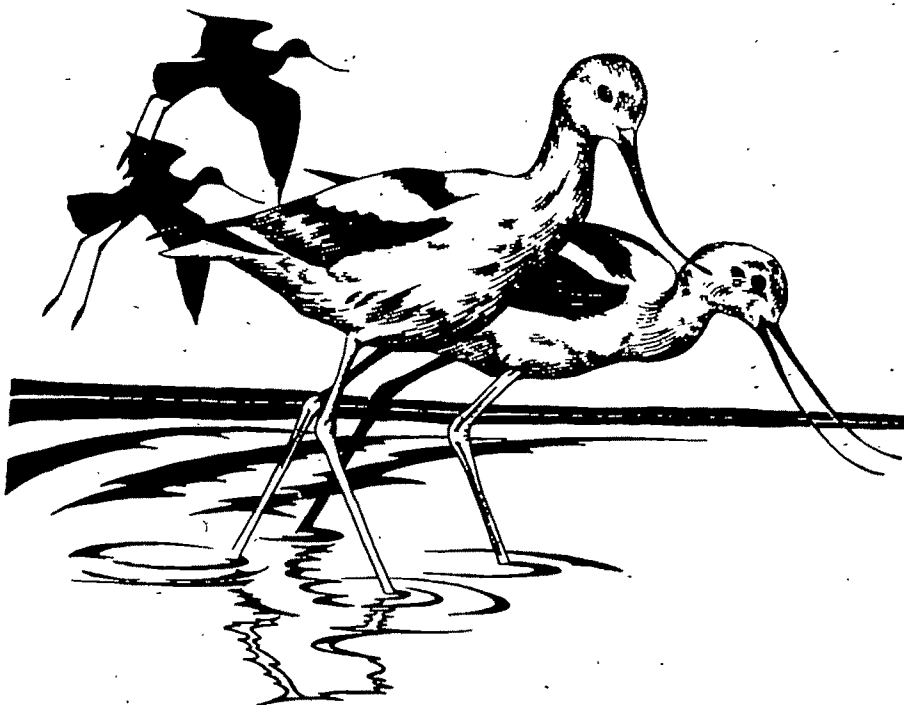
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glaciers. "Every farm woodland, in addition to yielding lumber, fuel and posts, should provide its owner a liberal education. This crop of wisdom never fails, but it is not always harvested."

Space, to one who rises at 3:30 a.m. of a July morning to hear the progression of birds caroling, bears no resemblance to the property lines on local zoning maps: "It is a fact, patent both to my dog and myself, that at daybreak I am the sole owner of all the acres I can walk over. It is not only boundaries that disappear, but also the thought of being bounded." Time likewise ceases to conform to the official linear reckoning. The seasonal rhythms of the earth and those of our daily bodily needs become more real than the numerals on our wrist watches.

The Earth As Community

Leopold is saying, in essence, just one thing. If he is wrong, then *Sand County Almanac* remains as beautiful poetry. If he is right, it is a powerful philosophical, educational and political tract. He is saying that *the land is a community to which we belong, not a commodity which belongs to us*. All of Leopold's writing has no other purpose than to argue this case.



Leopold scoffs at "the inventing of subterfuges" to give the wilderness economic importance. The time has come, he believes, for the conservationist to abandon subterfuge and speak his honest conviction that all members of the biotic community are valuable individuals with a *right* to exist, both for themselves and for the integrity of the community. This

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is a simple fact we all once knew before we learned to mouth the sophisticated subterfuges. "When I call to mind my earliest impressions," he writes, "I wonder whether the process ordinarily referred to as growing up is not actually a process of growing down; whether experience, so much touted among adults as the thing children lack, is not actually a progressive dilution of the essentials by the trivialities of living."

Leopold jolts us into seeing other, mutually interdependent viewpoints:

The mouse is a sober citizen who knows that grass grows in order that mice may store it as underground haystacks, and that snow falls in order that mice may build subways from stack to stack: supply, demand, and transport all neatly organized. To the mouse, snow means freedom from want and fear.

* * *

The rough-legged hawk has no opinion of why grass grows, but he is well aware that snow melts in order that hawks may again catch mice. He came down out of the Arctic in the hope of thaws, for to him a thaw means freedom from want and fear.

Arrogant Human Perception

Leopold has learned that to absolutize our narrow wavelength of perception is sheer arrogance. On their pre-dawn meanderings, Leopold's dog pays scant attention to the birds and their vocal goings-on, "for to him the evidence of tenantry is not song but scent. Any illiterate bundle of feathers, he says, can make a noise in a tree. Now he is going to translate for me the olfactory poems that who-knows-what silent creatures have written in the summer night."

Similarly Leopold remembers his first wolf hunt and the lesson it taught him of perspectives far beyond that of our puny human timespan:

We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view.... So also with cows. The cowman who cleans his range of wolves does not realize that he is taking over the wolf's job of trimming the herd to fit the range. He has not learned to think like a mountain. Hence we have dust bowls, and rivers washing the future into the sea.

Once we realize that every biotic community has its own personality, we are no longer surprised that each responds in unique ways to our advances. The hunter, the camper, the woodsman, the farmer who does

not know this will quickly find out. Those who plan foolishly and neglect the uniqueness of the land will be punished; those who approach it with respect will reap its rewards. And the rewards are not limited to an abundant game supply and crop production. For he who is willing to attend the land enters a whole new sphere of existence. The land does not just respond (and certainly not just react) to his advances. It initiates the contacts, engages his attention, displays a new visage in each of its daily and seasonal moods. In short, he discovers the kinds of things we discover whenever an acquaintance reveals his or her personality to us: we are not just having interesting new experiences (not even "higher" aesthetic ones), but are being taken out of ourselves into whole new modes of relationships.

Leopold is saying that "having fun" (which seems to be the best we can wish upon departing vacationers) is a poor substitute for being joyful; that perhaps the highest form of human activity is, paradoxically, attentive receptivity—not passivity—to the revelations of the land in all its moods. Consequently the question of "What can we do with the land?" is impudent and must be replaced by the question, "What can the land do with us?"—a question that admits of no single answer, but rather an endlessly rich and unpredictable series of encounters.

Need for Internal Change

If Leopold is right, then the casual level of current ecological faddism will not do. It will not do to be a "conservationist" if that means simply: "obey the law, vote right, join some organizations, and practice what conservation is profitable on your own land; the government will do the rest...." In our attempt to make conservation easy, we have made it trivial. The true vocation of the environmental movement is to create an "internal change" in our intellectual emphases, loyalties, affections



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and convictions." Leopold does not seek to denigrate the hard-won victories of technology and medicine, nor to turn back the clock. Neither will he subscribe to a belief in automatic progress: "To build a road is so much simpler than to think of what the country really needs."

Leopold refuses to let it rest at that. Mourning the extinction of the passenger pigeon, he is struck by the irreversibility and finality of the loss:

No living man will see again the onrushing phalanx of victorious birds, sweeping a path for spring across the March skies, chasing the defeated winter from all the woods and prairies of Wisconsin. Men still live who, in their youth, were shaken by a living wind. But a decade hence only the oldest oaks will remember, and at long last only the hills will know.... Our grandfathers were less well-housed, well-fed, well-clothed than we are. The strivings by which they bettered their lot are also those which deprived us of pigeons. Perhaps we now grieve because we are not sure, in our hearts, that we have gained by the exchange. The gadgets of industry bring us more comforts than the pigeons did, but do they add as much to the glory of the spring?

The value system behind all this—"comfort at any cost"—is not acceptable to a believer in "the land ethic" and Leopold doubts that it can long appeal even to the average comfort-seeking American. Are we willing to subscribe to a system whereby "we all strive for safety, prosperity, comfort, long life, and dullness"? And what if we should succeed?

Freedom with Blank Spots

But Leopold seems incapable of bitterness. *Sand County Almanac* is resonant with the joy that is his for the gift of having lived in an age not yet bereft of contacts with the wild:

Man always kills the thing he loves, and so we, the pioneers, have killed our wilderness. Some say we had to. Be that as it may, I am glad I shall never be young without wild country to be young in. Of what avail are forty freedoms without a blank spot on the map?... Perhaps our grandsons, having never seen a wild river, will never miss the chance to set a canoe in singing waters.... It is a kind providence that has withheld a sense of history from the thousands of species of plants and animals that have exterminated each other to build the present world. The same kind providence now withholds it from us.

Aldo Leopold battled to save "some tag ends of wilderness." A quarter of a century later, the tag ends are fewer. It is now more than ever, as Leopold insisted, "last call for the wild."

BOOK REVIEWS

RECENT AMERICAN FICTION

By V. S. Pritchett

The reviewer is one of the most distinguished of English critics, as well as a notable author of short stories and, most recently, memoirs. His review is abridged from *The New York Times Book Review*. The book's author, Alfred Kazin, has contributed two earlier articles to *Dialogue*: "The Writer and the City" and "Hawthorne: The Ghost Sense."

Bright Book of Life: American Novelists and Storytellers From Hemingway to Mailer. By Alfred Kazin. Boston: Atlantic-Little, Brown & Co. 334 pp.

In this study of the American novel from Hemingway to Mailer, Alfred Kazin is a critic with whom the foreigner can see eye to eye. He understands that novels are novels and will stand or fall by the way they are done. He believes in "the patience and depth of fiction itself"; it is not journalism. It brings no news:

The world is a world, dumb as nature, not a novel. The world as our common experience is one that only the journalist feels entirely able to set down. It is a confidence that those who stick to fiction do not feel, for the "world" is not an experience in common, still less is it a concept on which we all agree. It is not even as close as we think.

In an aside on the American devotees of the Absurd, like John Barth, he makes a point which is also applicable to those critics who have, so to say,

become industrialized. He has this passage from Barth: "And it was this. I simply ran out of gas. There were no reasons to do anything.... It is the malady of cosmopolis, the cosmic view."

Kazin's comment is: "But our American absurdists do explain and explain, for unlike the Europeans who invented the term because they have a quarrel with existence, ours have merely realized the limitations of our own power. So the absurd becomes transmissible."

No work of art transmits. In the great American novels one is aware of an invisible, fabulous presence that is almost human: some emanation of myth, so that America's self becomes a hidden character, as Russia used to be in Russian literature. This insight is imaginative in the highest sense; but transmitted by the critic it becomes pretentious question-mongering. What was virtue in the artist becomes self-importance in the explaining critic.

Kazin has his obscure passages when he telescopes his ideas, but he is, for the most part, clear and graceful. His book is useful to the foreign reader for he has read everything worth reading from Hemingway onwards, but it is more than a work of reference. If one tests him on Faulkner, Carson McCullers, Ralph Ellison, Nathanael West, James Baldwin, Norman Mailer, John O'Hara, Flannery O'Connor and Vladimir Nabokov—to take names at random—he goes for the

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essence of his novelists, major and minor, rather than for the social or metaphysical conundrums surrounding them. He is a catholic and discursive commentator who makes excellent asides. He knows where his argument is going as the novel leaves the confidence of the Hemingway period for the brilliant assertions that have marked the disintegration of forms we are now getting used to.

Hemingway's Linear World

The essays on Hemingway and Faulkner show his gift of definition at their best. So Hemingway "identified literature with the act of writing itself." Writing was "the word-for-word struggle against the murkiness of death" and "the sovereignty of the story teller... became for Hemingway the *matter* of fiction." And again "Hemingway managed, by one word after another, to make the world as linear as his prose, as stripped as a prize ring, as 'clean' as an operating room." The grace was desperate and the idea aristocratic: the world became a fable that "expressed him," the artist who replaces the lost values of religion with the images of art. The quality that still strikes one in Hemingway is, as Kazin says, his "presentness"; it exhilarated as it also offended, for if he was a master of leaving out everything that was not "the moment," we felt that he was sentimental about the things in life that are recalcitrant to know-how or skill. His characters have no past and indeed no future. They live in what are virtually "stills" in time that his art has arrested.

This appeared not to be so when the superb short stories first appeared,

mainly I think because of the spell of Hemingway's use of dialogue, a spell that acted powerfully on the European reader. It was a shock to find that one had to consider a phrase like "I feel bad" as a possible, acceptable description of human feeling; one took it to be realism; we now see that ordinary speech was in itself the language of fable. But it did strike Europeans even in the old days that there was an inevitable lack of committal in those who, like Hemingway, saw World War I perforce as voyeurs or amateurs of disaster. This is not to say they were not brave, they were simply having an *éducation sentimentale*.

Faulkner: The Past as Present

Faulkner seems to have pitied Hemingway for not trying to go beyond what he knew he could do. Faulkner could not be reduced to a style and his sense of "presentness" is the uncontrollable presentness of the past in the mind. "The past is never dead," he said. "It is not even past." The unconscious, by its very confusion, possesses the gift of both making history and writing it. Kazin writes:

Man rushed slaves into the South with the same heedlessness and pride with which he tried to claim the land itself—the land which even the Indians did not "own". The act of appropriation in Faulkner is usually blind; it is the blood speaking, and over the act *heedless* and *proud*, as Faulkner liked to say, the doer stands amazed.... But the retrospect of history is endless, the irrevocability of action, tragic.... Virtue is powerless.... Virtue intervenes when power is gone.

If Faulkner has his generation's concern with the "moment"—it ap-

peared in all the arts in Europe, indeed the idea was purely European—it was concern for an impossible moment, as Mr. Kazin points out in this quotation from *Light in August*: “Ought not to suffer for it like he made them that loves and lost suffer.... But if folks could maybe just let him for one day. Like it hadn’t happened yet. If it could be like that for one day.”

After these masters, we move on to that extraordinary outburst and turnover of American talent that has followed in every decade since. American novelists usually complain that they are isolated; but if this is so, it has had the advantage of making every man his own prophet. Every voice acquires a personal urgency which will be eclipsed only when someone more urgent appears—urgency being connected with the changes in the canon of “the American experience.”

Region and Race

But the American novel has excelled in regional outbursts, like the Southern; or racial ones like the Jewish or the black, which flash upon the screen with all the force of the newly released. Kazin finds among the writers from the South since 1940 a spirit of endurance. In Flannery O’Connor he notes the “Pascalian perfection” of her phrasing and that her characters are “souls in the wrong world, creatures totally resentful.” And—it seems to me—she is linked to the main American tradition when she shows that “illusion ends in physical smash-up,” rather than in tragedy. Walker Percy, a polished but slighter figure, writes in *The Moviegoer* of “our cast-off stage.” Carson McCullers was a greater mythmaker than she was

a novelist; she had “an extreme sense of human separateness,” the “sense of total weakness before earthly damnation.” Her landscapes are “hot with silent emotion.” Moving northward we find that J.D. Salinger is the great pantomimist, writing of “the Glasses as if they were the Holy Family.” In John Updike “the world is all metaphor.”

The commentaries on the dominant Jewish group—Norman Mailer, Saul Bellow, Philip Roth, Bernard Malamud and the traditional I.B. Singer—are much longer and are more concerned with the enormous release of intellectual vitality and the various directions Jewishness has taken than with precisely how these writers have written. This group owes its achievement, it seems to me, to a literary inheritance which, although Yiddish, has strong markings of the Slavic. There is nothing of the Teuton in them. They know what the western Teutons have long ago forgotten: the sense of looseness, timelessness and space. They have a natural fecundity in storytelling, they have two imaginations, and the knowledge of mixed culture has given them a joy in style.

In Mailer, Kazin finds the motive is not joy but a frantic desire to keep the zing in his subject. Mailer makes his imagination and his fetishes public: he is all theater now; but, whether the act wearies one or succeeds, the command of wild metaphor as a show in itself always is scalding, comic and adventurous.

I find Bellow richer, more intricate and substantial. His novels stay in the mind because he has worked at texture; and, if he is sometimes mannered, he

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is extraordinarily inventive in finding new narrative forms and indeed a style for urgent, private thoughts, as Kazin says. And for narrative—and surely that counts more than anything—see the opening chapters of *The Adventures of Augie March*. The self-teaching is conscious that it is done with irony and verve. I like Kazin's witty aside "that the Bellow hero, though often distraught, has the powerful ego of Joseph relating his dreams to his jealous brothers."

The Fact Novel

Where I find Kazin's utterances most thoughtful are in the later pages where he spends some time on two aberrations of the American novel: what he call "the fact novel": e.g., Truman Capote's *In Cold Blood*, and the novel as journalism.

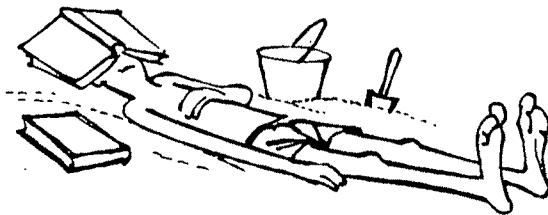
His argument goes like this: The novel of the camera, the tape-recorder, the strictly factual document was intended to replace fiction and to be superior to it as contemporary history; but in achieving this it makes our participation in the story narrow and helpless:

But irony more than truth is the motive of such "fact" books, for the point is made that there is no "sense" to the crime. That is what relieves the

liberal imagination of responsibility and keeps it as a spectator. In a "real" novel—one that changes our minds—a single Raskolnikov or Clyde Griffiths commits a singular crime (and is usually pursued by a single law-enforcer who has no other crime to uncover). The resolution of the crime... gave the moral scheme back to us.

In the fact-book and films, we act nothing out. We remain viewers who can take any amount of shock without changing our habits. We are cut off from "the inherent consistency and exhaustive human relationships of the novel." We have become "ap-poratchicks." And here Kazin returns to Mailer fairly but more forcefully—"He has both lived and written his life with the greatest possible appetite for the power and satisfaction open to Americans since 1945"—but there is this warning: "The non-fiction novel exists in order *not* to change the American situation that makes possible so much literary aggression against it."

Kazin's book comes to no conclusion. It ends a pleasant examination of Nabokov with a sentence: "He has saved *us* from being always at the mercy of the age." I do not see why we should not be grateful for that respite, whatever may happen to the novel in the future. Like "the world," the Age also is as dumb as nature.



DEMYTHOLOGIZING A GENIUS

By Wolf Von Eckardt

This biography of America's foremost architect in the 20th century, says the reviewer, rescues Frank Lloyd Wright from his own mythology. Wolf Von Eckardt is the architecture critic of *The Washington Post*, where his review originally appeared, and the author of several books about contemporary architecture and urban planning.

Frank Lloyd Wright: An Interpretive Biography. By Robert C. Twombly. New York: Harper & Row. 373 pp.

Frank Lloyd Wright was the architect of a monumental legend as well as 800 buildings. The very uniqueness of those buildings—they are individualistic, revolutionary, often contradictory and always romantically reformist—conspired to frustrate Wright from realizing his impossible dream. He dreamt of creating an indigenous American architecture that would at once express and advance America's ideals and bring about a spiritual and esthetic renaissance.

Frank Lloyd Wright was, in the end, the messiah of an America that never was. This messiah of Wright's private creation was a hurt, sensitive genius who, although he disdained money and prestige in his pursuit of integrity and truth, was rejected and ridiculed by his countrymen, driven into the arms of foreigners, who, of course, finally betrayed him too, stealing all of his ideas for the Bauhaus and International Style.

The truth is that Wright was, from the start of his remarkable career, an eminently successful man who delighted in controversy and publicity, enjoyed expensive automobiles and his permanent suite at New York's Plaza Hotel and was possessed by enough egocentricity for a whole pantheon of Hollywood movie stars. He considered normal professional competition a matter of open warfare, imitation as robbery, and ignorance an insult. He was outraged by the mildest criticism.

What hampered and hurt him, in fact, was not lack of appreciation—he was a national institution for at least 50 of his nearly 90 years—but too much uncritical acceptance and thoughtless praise. It still does.

Until this superb book came along, Frank Lloyd Wright's many biographers all swallowed the legend, merely passing on the Wright blueprint in various versions. Only a few serious architecture critics, notably Vincent Scully and Peter Blake, attempt to place his architecture into perspective. But even they tend to succumb to idolatry with the result that they make this cranky, eccentric, opinionated, flamboyant, iconoclastic, arrogant and slightly screwy genius even less sufferable than he probably was.

Robert C. Twombly's astounding achievement is that he carefully, even reverently, rescues the man from his own mythology. And that not only makes him human and interesting, but also gives him the genuine im-

portance he deserves in cultural history.

Wright, as Twombly's painstaking and original book makes clear, would have been a great and revolutionary architect had he died in 1908 at the age of 39. By that time, he had firmly established the principle that the interior accommodation of human need should take precedence over exterior purity of architectural form.

Designing for Human Needs

Wright established this principle in the design of his houses—the bulk of his work. Of his 800 designs, almost 600 are residences. He thought of them not as status symbols or works of art, but as problem-solving mechanisms—means for achieving a harmonious life. He would “liberate” women from their kitchen isolation, achieving a new closeness to nature, and strive for unity in every aspect of the building—the furniture, light fixtures, rugs, pictures, heating apparatus and downspouts. Everything was to be “organic”—natural, wholesome, honest and thus spiritually uplifting. He saw technology not as a gadgety plaything, but as the modern opportunity to incorporate natural principles into his architecture.

Technology was also to serve art. And art, he fervently believed, would improve life. His life, by the same token, had a profound influence on his art. That, in essence, is what Twombly's fascinating biography is all about. Where others have been writing about Wright the architect who was also an eccentric, or Wright the eccentric who was also an architect, Twombly tells us about Wright's life

and work as an inseparable whole, interpreting each in terms of the other without the arrogant psychoanalyzing that one so often finds in current biographies.

There's much to tell: about Wright's strong-willed mother; about Catherine —“a very simple girl”—whom he married before he discovered the more adventurous morality of his romantic nature; about Mamah Borthwick Cheney, the wife of a client for whom he left Catherine and six children. (It was for him a matter of “superior honesty.”)

After Mamah was killed with her two children and four others when a mad chef set fire to the house, Wright threw himself into his work and found a new wife, Monid Miriam Noel, who, in the parlance of the day, was “distinctly spirituelle.” She also proved difficult, to put it mildly. Then came Olgivanna, a Montenegrin divorcee—“dark, aristocratic, and mysterious,” according to Wright. Her mysticism was enhanced at Georgi Gurdjieff's Institute for the Harmonious Development of Man at Fontainebleau, France, a peculiarly art nouveau institution where oriental dance, manual labor and esoteric antics combined to breed a new aristocracy of the spirit. Olgivanna had a profound influence on the Taliesin Fellowship where Wright's apprentices were taught architecture by way of hero-worship and where a pseudo-Wrightian architecture is still blasphemously produced.

One can, as Twombly describes Wright's work, clearly perceive the influence of this progression of wives from socially-conscious suburbanite to suffragette to expatriate artist to faintly oriental mystic. The work

ranges from the modest Usonian house to the Guggenheim Museum, from Broadacre City (Wright's only attempt at community design) to the 528-story Mile High skyscraper project, with "Fallingwater" (the house built over a Pennsylvania waterfall) as its crowning glory. In all of this there is, beyond an exuberant artistry, a built-in idealistic social order.

Wright's architecture hoped to redeem us with a kind of "therapeutic environmentalism," as Twombly aptly calls it.

It seems almost in sorrow that Twombly concludes with a lingering suspicion "that only Frank Lloyd Wright himself could have lived comfortably in a landscape of his own design." What about that suite at the Plaza?

HISTORIAN OF THE AMERICAN FRONTIER

By Ivan R. Dee

Currently associate editor of *The Chicago Tribune Book World*, the reviewer was formerly senior editor of *Quadrangle Books*. His review is abridged from *The New York Times Book Review*.

Frederick Jackson Turner: Historian, Scholar, Teacher. By Ray Allen Billington. New York: Oxford University Press. 599 pp.

When Frederick Jackson Turner proposed his "frontier thesis" in 1893, a great epoch of American history was drawing to a close. An obscure government census pamphlet had noted that the country's unsettled area was no longer discernible, that "there can hardly be said to be a frontier line." In short, the westward migration that had occupied Americans for more than two centuries was ending.

Turner was a historian who sought to explain the American people to themselves in terms of their frontier experience. Put simply, he thought

the frontier had had a profound democratizing influence on American institutions, that it was the main reason why American democracy was so distinct from anything Europe had known. Free land on the frontier had prevented the growth of large estates and had attracted men who wanted to better themselves. "The frontier," Turner wrote, "was a gate of escape from custom, class restraints, economic and social burdens."

Today, 41 years after his death and despite quibbles over the details of his work, Turner's frontier thesis remains one of the key interpretations of American history. Yet hardly anyone outside the historical profession itself knows who Turner was. (When the executive council of the American Historical Association was asked to select the six greatest historians in the nation's history, Turner was named first on every ballot.) Now Ray Billington, an accomplished historian in his own right, has given us a superior

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biography of the man and his ideas. Working with a life essentially devoid of drama, Billington has uncovered an old-fashioned story of quiet adventure.

The book is most important as the history of an idea, which Billington discusses with real authority and an awareness of Turner's shortcomings as well as his contributions. But, as a bonus, I know of no better portrait of academic life as it used to be in this country. Turner's career was almost classically that of the university professor in the early 20th century—pinched, indifferent to personal glamour, distant from events, yet the object of a curious respect from the larger public. Turner's papers have yielded to Billington a remarkably rounded picture of this life, so different from the pyrotechnics of today's professors who have chased—and gagged on—power.

The Making of an Historian

Frederick Jackson Turner was a man at home in the Midwest. He was born in 1861, in Portage, Wisconsin, a town just emerging from pioneer days. As a boy he read widely, but he later remembered the major influences in his early life to be his family and the "quasi-frontier atmosphere of central Wisconsin." Young Turner realized early that life in Portage was different from what it was in more established communities. He grew to love nature and to recognize that civilization was overrunning it in the American West. "Had Turner been city born and bred," Billington suggests, "he would almost certainly not have evolved his frontier thesis."

As a student at the University of

Wisconsin in the 1880's, Turner discovered an intellectual excitement in history. What especially interested him was the occupation of a continent and the distinctive ideas and institutions resulting from that occupation—principal among them democracy and federation.

In 1888 Turner went east to work toward a Ph.D. at Johns Hopkins University in Baltimore, Maryland, at the time the pre-eminent school for the study of American history. Studying with Woodrow Wilson (then a professor of political science, later President of the United States) and the economist Richard T. Ely, Turner steeped himself in political economy and economic theory. By the time he was ready to return to Wisconsin, doctorate in hand, he had acquired the theoretical grounding necessary to shape the facts of Western history he was accumulating.

Billington is excellent on the intellectual sources of Turner's ideas. Those who influenced him most were political economists who themselves had been influenced by Darwinism. From Francis A. Walker, director of the census in 1870 and 1880, Turner learned that expansion progressed in set stages. From two French theorists, Emile Boutmy and André Churillon, came the idea that little authority was needed to maintain order on thinly populated lands, where men turned naturally to democratic practices. In Henry George, Turner found rhapsodies about the benefits of free land and the environment as a molding force. From Achille Loria, an Italian, came an argument that human behavior was a product of the ratio of men to free land. And Turner relied

heavily on Walter Bagehot, an Englishman who thought the American character was shaped by the struggle against the wilderness. Together with his Hopkins experience, these readings moved Turner toward a belief in environmentalism to explain the peculiarities of American institutions—which took him to the threshold of the frontier theory.

Turner had agreed to speak at a special gathering of historians in Chicago in 1893, as a feature of the World's Columbian Exposition. On the evening of July 12, he delivered his now-famous paper on "The Significance of the Frontier in American History." He was 31 years old.

The frontier was ending, Turner began. It had shaped the nation's institutions by forcing them to adapt to the changes of an expanding people. On the frontier, civilization was perennially reborn. Frontier democracy was thus selfishly individual, intolerant of administrative experience and education, and zealous for individual liberty. It spawned many of the distinctive social and intellectual traits of Americans: coarseness with strength, inquisitiveness, practicality and inventiveness, expediency, materialism, a restless energy, and the exuberance of freedom.

End of an Era

With the closing of the frontier, Turner concluded, the first period of the nation's history ended. Americans must now experience a major shift in their national psychology, adjusting their economy, politics and daily lives to a closed-space world.

Although Turner's theory at first received little notice, it soon gained

currency in an age of progressivism when democracy was an idea to be achieved. Billington traces its rise—how men such as Woodrow Wilson helped to proselytize it, and how the changed social atmosphere of the 1880's was crucial to its acceptance. While the frontier thesis offered no panaceas, it did seem to reassure Americans that big government could never destroy their deeply ingrained individualism; that overseas expansion could nurture democracy rather than entangle it; and that the egalitarianism produced on the frontier would win out over the social and economic inequities of the new industrialism.

Turner lived out his life teaching at Harvard, then retiring to Madison, Wisconsin, a family man of simple pleasures, the greatest historian of his time. As a teacher he was something special. He not only lectured well, devoted time to his students, and built a graduate history program at the University of Wisconsin that still is one of the best in the country. He was also a good companion in an age of stuffed-shirt college professors, "the living embodiment of the frontier egalitarianism that he venerated," as Billington puts it.

We now live with some of the most interesting implications of the frontier thesis. As Turner foresaw, the expansionist energies of Americans could not be stifled by the passing of the frontier: a vigorous foreign policy seeking overseas markets and possessions was an inevitable aftermath. At home, a social revolution would bring more government control into a closed-space area. As another Wisconsin historian, William Appleman Wil-

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liams, has suggested, Americans would be forced to create a real community rather than continuing to run away. We are still trying.

Turner's work has had a continuing impact on historical research and the writing of textbooks. "His theories on the frontier... were to influence more students, generate more controversy, and excite more writing after his death than they had when he lived," Billington concludes. Turner revised some of the details of his theories in later years (he found, for example, that cheap Western lands were not a direct "safety valve" be-

cause poorer people in the East and in Europe could not generally afford to buy a small farm on the frontier), but over-all they remained sound.

"I sometimes wonder," Turner wrote late in his life, "if after all I have not been simply, rather blindly, trying to explain American history to myself instead of writing history!" How modest he was, and how well Billington judges him: "The boldness of his imagination gave his fellow craftsmen stately new edifices to build, and the tools with which to build them." No one who reads this uncommonly good book is likely to disagree.



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James P. Grant and William Rich
SOCIAL JUSTICE AND FAMILY SIZE

George B. Baldwin
POPULATION POLICY
IN DEVELOPED COUNTRIES

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A CRITIQUE OF CACOPHONY

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A NOTE TO THE READER

The United Nations has designated 1974 as "World Population Year" to focus attention on one of the most urgent and baffling international problems.

Part of the difficulty comes from the unusual division of responsibility in any effort to lower the rate of population growth. International agencies can provide research and technical assistance; national governments can make policy and initiate programs; but in the end individual men and women will decide whether and when to have children, and how many. While official programs for family planning can influence these decisions, other factors—such as custom, emotion, nutrition, and social and economic reforms—may be equally or even more important.

The articles in our special section suggest the intricacies of this problem. Apart from the factors just mentioned, there is the disturbing time gap between a lowered birthrate and a comparably low rate of population growth. That is, even if a country has now reduced its birthrate to the point of simply replacing parents, it would take many decades before population actually reached a stable level. For a layman, the reasoning is buried in the mysteries of demographic statistics, but it apparently has to do with the high number of females still of childbearing age.

However, the implications are clear: barring catastrophes such as war, famine or pestilence, the solutions to dangerous population growth will be slow in the best of circumstances; therefore, thinking and planning must be done now if results are to be reached in time to avert future tragedies.

* * *

One of the consoling aspects of the human condition is that, despite current disasters and portents of future doom, the impulse toward art and play remains irrepressible. So, to balance the somber tones of the discussion of population, several articles in this issue address themselves to painting, music and golf, areas in which imagination and craft combine to make life more congenial, vivid and endurable—although not necessarily more harmonious, since opinions in the arts and sports differ widely and often heatedly, as our contributors make clear.

N.G.

special section

Population and Development

A RACE AGAINST TIME

By Robert S. McNamara

As president of the World Bank since 1968, Robert S. McNamara has focused his attention on problems of economic development. Under his leadership, the World Bank established a department of population projects, providing support for family planning programs in developing countries. On a number of occasions, Mr. McNamara has spoken about the crucial relationship between population and development, arguing that rampant population growth was "the greatest single obstacle" to economic and social progress in the developing world. The following article has been adapted, with permission, from several of his statements on this theme.

Mr. McNamara was U.S. secretary of defense from 1961 to 1968. He taught business administration at Harvard University before joining the U.S. air force during World War II. He was president of the Ford Motor Company when President John F. Kennedy made him a member of the cabinet. He is the author of *The Essence of Security*.



The problem of excessive population growth is, by half a dozen criteria, the most delicate and difficult issue of our era—perhaps of any era in history. It is overlaid with emotion. It is controversial. It is subtle. It is immeasurably complex. It is an issue, finally, that is so hypersensitive—giving rise to such diverse opinion—that there is an understandable tendency simply to avoid argument, turn one's attention to less complicated matters, and hope that the problem will somehow disappear.

But the problem will not disappear. What may disappear is the opportunity to find a solution that is rational and humane. If we wait too long, that option will be overtaken by events. We cannot afford that. For if there is anything certain about the population explosion, it is

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that if it is not dealt with reasonably, it will in fact explode: explode in suffering, explode in violence, explode in inhumanity.

To put the issue simply: the greatest single obstacle to the economic and social advancement of the majority of the peoples in the underdeveloped world is rampant population growth. Having said that, let me make one point unmistakably clear: the solution of the population problem is in no way a substitute for the more traditional forms of developmental assistance—aid for economic infrastructure; aid for agriculture; aid for industrialization; aid for education; aid for technological advance; aid for a whole gamut of productive projects. But nothing would be more unwise than to allow these projects to fail because they are finally overwhelmed by a tidal wave of population.

Surely, then, it is appropriate that we should attempt to unravel the complexities that so confuse this critical issue.

Some Frightening Projections

One can begin with the stark demographic dimensions. Population increase is simply the excess of births over deaths. For most of man's history the two have been in relative equilibrium. Only in the last century have they become seriously unbalanced. It required sixteen hundred years to double the world population of 250 million, as it stood in the first century A. D. Today, the more than 3,000 million on earth will double in 35 years time, and the world's population will then be increasing at the rate of an additional 1,000 million every eight years.

To project the totals beyond the year 2000 becomes so demanding on the imagination as to make the statistics almost incomprehensible. A child born today, living on into his 70's would know a world of 15,000 million. His grandson would share the planet with 60,000 million. In six and a half centuries from now there would be one human being standing on every square foot of land on earth.

Such projections are, of course, unreal. They will not come to pass because events will not permit them to come to pass. Of that we can be certain. What is not so certain is precisely what those events will be. They can only be: mass starvation; political chaos; or population planning. Whatever may happen after the year 2000, what is occurring right now is enough to jolt one into action.

The average population growth of the world at large is 2%. Many underdeveloped countries are burdened with a rate of 3½% or more. A population growing at 1% doubles itself in 70 years; at 2% it doubles in 35 years; at 3½% it doubles in only 20 years.

Now, if we are to reject mass starvation and political chaos as solutions to this explosive situation, then there are clearly only three conceivable ways in which a nation can deliberately *plan* to diminish its rate of population growth: to increase the death rate; to step up the migration rate; or to reduce the birth rate.

No one is in favor of the first choice. On the contrary, under the impact of public health programs, death rates are falling throughout the underdeveloped areas. Even simple medical improvements—better sanitation, malaria suppression, widespread vaccination—bring on a rapid and welcome decline in mortality. The low-level death rates which Europe required a century and a half to achieve are now being accomplished in the emerging areas in a fifth of that time.

The second choice is wholly inadequate. Increased migration, on any scale significant enough to be decisive, is simply not practical. Countries concerned about their own future crowding are understandably disinclined to add to it by accepting more than a limited number of foreigners. But the more important point is that the continually expanding increment, on a global basis, is already so massive that migration as a solution to population pressure is manifestly unrealistic.

That leaves the third choice: a humane and rational reduction of the birth rate. This alternative is not simple, but it is feasible; and most important, it is necessary because the consequences of continuing the present population growth rates are unacceptable.

The Fate of Children

The first consequence can be seen in the gaunt faces of hungry men. One half of humanity is hungering at this very moment. There is less food per person on the planet today than there was 30 years ago in the midst of a worldwide depression. Thousands of human beings will die today—as they die every day—of that hunger. They will either simply starve to death, or they will die because their diet is so inadequate that it cannot protect them from some easily preventable disease.

And yet the thousands who die are perhaps the more fortunate ones. For millions of other children, suffering the same malnutrition, do not die. They live languidly on—stunted in their bodies, and crippled in their minds.

The human brain reaches 90% of its normal structural development in the first four years of life. We now know that during that critical period of growth, the brain is highly vulnerable to nutritional deficiencies: deficiencies that can cause as much as 25% impairment of normal mental ability. Even a deterioration of 10% is sufficient to cause a serious handicap to productive life.

What is particularly tragic in all of this is that when such mentally deprived children reach adulthood, they are likely to repeat the whole depressing sequence in their own families. They perpetuate mental deficiency, not through genetic inheritance; but simply because as parents they are ill-equipped mentally to understand, and hence to avoid the very nutritional deprivations in their own children that they themselves suffered.

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Thus hunger and malnutrition forge a chain of conditions that only spiral the total human performance dismally downward. Alertness, vitality, energy, the ability to learn, the desire to succeed, the will to exert an effort—all these inestimable human qualities drain away.

But the population explosion's corrosive effects on the quality of life do not end with hunger. Current birth rates throughout the emerging world are seriously crippling developmental efforts. It is imperative to understand why. The intractable reason is that these governments must divert an inordinately high proportion of their limited national savings away from productive investment simply in order to maintain the current low level of existence.

Each additional child brought into the world must not only be fed, but clothed, housed, medically cared for, and supported by at least minimal educational services. All of this requires new capital—new capital that cannot be invested in other desperately needed sectors of the economy. For approximately the first 15 years of their lives, children cannot contribute economically to the nation: simply because they are young they are consumers rather than producers.

More and more classrooms must be built; more and more teachers must be provided; more and more vocational training facilities must be established. But despite all this effort both the quantity and quality of education will inevitably decline. It simply cannot keep pace with the mounting waves of children. Further, as ill-educated, perhaps wholly illiterate, children reach the age when they ought to become producers in the economy, they are engulfed by the hopelessness of underemployment. In many of the world's shanty towns 50 to 60% of the adolescents are out of work.

Not only are these youngsters unequipped for the jobs that might have been available, but the total number of meaningful jobs itself tends to decline in proportion to the population simply because the government has been unable to invest adequately in job-producing enterprises. The capital that ought to have been invested was simply not available: It was dissipated by the ever rising tide of additional children.

This, then, is the cruel and self-perpetuating dilemma that governments face in underdeveloped countries overburdened for long periods with high birth rates.

Resort to Abortion

But what is true at the national level is repeated with even greater poignancy on the personal family level. Millions of individual families wish to avoid unwanted pregnancies. And when these families cannot find legal and compassionate assistance in this matter, they often turn to desperate and illegal measures.

Statistics suggest that abortion is one of the world's most commonly chosen methods to limit fertility—despite the fact that in most societies

it is ethically offensive, illegal, expensive, and medically hazardous. In five countries of Western Europe, it is estimated that there are as many illegal abortions as live births. In India, the estimate is that each month a quarter of a million women undergo illegal abortion. In Latin America, illegal abortion rates are among the highest in the world. In one country, they are said to total three times the live birth rate; in another, to be the cause of two out of every five deaths of pregnant women. Further, there are indications that the illegal abortion rate in Latin America is increasing, and that multiple illegal abortions among mothers are becoming common.

The tragic truth is that illegal abortion is endemic in many parts of the world. And it is particularly prevalent in those areas where there is no adequate, organized family-planning assistance. The conclusion is clear: where the public authorities will not assist parents to avoid unwanted births, the parents will often take matters into their own hands—at whatever cost to conscience or health.

More People, More Wealth?

I have noted that this entire question of population planning is incredibly complex. It raises certain painful moral dilemmas. But quite apart from these, there is a vague and murky mythology that befores the issue. Not only does this collection of myths obscure the essentials of the problem, but worse still, it builds barriers to constructive action.

There is, to begin with, the generalized assumption that somehow “more people means more wealth.” As with all fallacies, there is a deceptive substratum of plausibility to the thesis. With the earlier rise of nationalism in the West—and the more recent emergence of newly independent countries in Asia and Africa—rapid population growth has often been regarded as a symbol of national vigor. It provided, so it was believed, the foundations of a more powerful military establishment; an economically advantageous internal market; a pool of cheap labor; and, in general, a prestigious political place in the sun.

But today in the underdeveloped world, nearly every one of these assumptions is false. Because rapid population growth tends seriously to retard growth in per capita income, the developing nation soon discovers that its economic vigor is diminished rather than enhanced by the phenomenon of high fertility. The hoped-for internal market becomes a mere mass of discontented indigents, without purchasing power but with all the frustrations of potential consumers whose expectations cannot be met.

“Cheap labor” in such countries turns out not to be cheap at all. For sound economic growth requires technological improvements, and these in turn demand higher levels of training than the strained government resources can supply. Though individual workers may be paid lower salaries than their counterparts abroad, their efficiency and

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productiveness are so low that the nation's goods are often priced out of the competitive export market. The "cheap" labor turns out to be excessively expensive labor.

Even the argument of expanding the population in order to provide a powerful military force is suspect—not merely because the expansion of one nation's forces will, in time, lead to a reactive expansion of its neighbors' forces, but also because modern defense forces require an increasing ratio of educated recruits rather than mere masses of illiterate troops.

As for political prestige, nations caught in the catastrophe of an uncontrolled population growth do not enhance their position in the family of nations. On the contrary, they find it slipping away as their once optimistic plans for progress turn inevitably to the politics of confrontation and extremism.

The Myth of Open Land

Akin to the myth that "more people means more wealth" is the notion that countries with large tracts of uninhabited open land have no need to worry about birth rates, since there is ample room for expansion.

The argument is as shallow as it is misleading. For the patent fact is that mere open land does not, in and of itself, support a high rate of population growth. Such open land—if it is to become the home of large numbers of people—must be provided with a whole panoply of heavy government investments: investments in roads, housing, sanitation, agricultural and industrial development.

The sound economic argument is quite the other way round. What such raw space requires first is not surplus people, but surplus funds for investment. And it is precisely surplus people in a developing economy that make the accumulation of surplus funds so incredibly difficult. Ghana's Minister of Finance put the issue forcibly in 1970 when that country launched the first national family-planning program in West Africa:

There are those in the grip of the dangerous illusion that the vast expanses of underdeveloped land invalidate the argument for the regulation of population growth in Ghana. They fail to realize that invariably the land remains undeveloped because of the lack of capital and technical skills required for its development....

The present rate of growth increases our population by 5,000 people every week.... In simple terms, it means that as a nation we are increasing in number faster than we can build schools to educate our youth, faster than we can construct hospitals to cater for the health needs of the people, and faster than we can develop our economy to provide jobs for the more than 140,000 new workers who enter our labor force each year. Our rate of population growth thus poses a serious threat to our ability both as individuals and as a government to provide the reasonable needs of our people.

A Faulty Comparison

A still more prevalent myth is the misapprehension that official programs of family planning in a developing country are wholly unnecessary since the very process of development itself automatically leads to lowered birth rates. The experience of Europe is cited as persuasive proof of this theory.

But the proof is no proof at all, for the theory is hopelessly irrelevant to today's conditions in the underdeveloped world. There are no comparable circumstances between what happened in Europe's early period of modernization, and what is happening in the emerging world today.

The historical fact is that conditions in Europe during its initial developmental period were far more favorable to lower rates of population growth. The birth rates were much lower than they are in the underdeveloped world today, the death rates had not yet drastically fallen, and by the time public health measures had accomplished that, the infrastructure of industrialization was already in place. Further, in 19th century Europe, unlike in the developing countries today, marriages were entered into later, and the level of literacy—always an important factor affecting population growth—was considerably higher.

Even in spite of all these advantages, it required some 70 years for Europe to reduce its birth rates to present levels. Today the average birth rate for developing countries is 40 to 45 per 1000 of population. To get this rate down to the 17 to 20 per 1000 that is common in contemporary Europe would require a reduction in the developing world of some 50 million births a year. To suppose that economic advancement by itself—without the assistance of well organized family planning—could accomplish this in any feasible time-frame of the future is wholly naive.

Indeed, even with family planning, no such promising results are feasible in less than two or three decades. What is feasible—indeed what is imperative—is the establishment of family planning on a scale that will stave off total economic and political disintegration in those countries where social progress is being seriously limited by the glut of unwanted births.

Motivation for Family Planning

No government can, of course, ultimately succeed in convincing its own population to undertake family planning, if parents themselves do not really want it. But the almost universal fact is that parents do want it. They often want it far more than their own political leaders comprehend. People—particularly poor, ill-educated people—may not understand the techniques of family planning. Most of them have only the most tenuous understanding of human biology. Often their limited comprehension is tragically confused by gross misinformation.

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But the notion that family-planning programs are sinister, coercive plots to force poor people into something they really do not want, is absurd. The pervasive prevalence of voluntary illegal abortion should be enough to dispel that fiction. The poor do not always know how to limit their families in less drastic and dangerous ways, but there is overwhelming evidence that they would like to know how.

All of us accept the principle that parents themselves must ultimately decide the size of their own family. We would regard it as an intolerable invasion of the family's rights for the State to use coercive measures to implement population policy. We can preserve that right best by assisting families to understand how they can make that decision for themselves.

The fact is that millions of children are born without their parents desiring that it happen. Hence, a free, rational choice for an additional child is not made in these cases. If we are to keep the right of decision in the hands of the family—where it clearly belongs—then we must give the family the knowledge and assistance it requires to exercise that right.

Nor need anyone be deterred from appropriate action by the myth that the white western world's assistance in family planning efforts among the non-white nations of the developing areas is a surreptitious plot to keep the whites in a racial ascendancy. The myth is absurd on purely demographic grounds, as well as on many others. Non-white peoples on the planet massively outnumber whites. They always have and always will. No conceivable degree of family planning could possibly alter that mathematical fact.

But a more relevant answer is that if the white world actually did desire to plot against the non-white nations, one of the most effective ways possible to do so would be for the whites to *deny* these nations any assistance whatever in family planning. For the progressive future of the non-white world is directly related to its indigenous economic development—and that, in turn, as we have seen, is dependent upon its being able to bring birth rates down to a level that will allow a significant increase in per capita income.

Is Famine Avoidable?

There is one more myth that obstructs the road to action. It is the belief that the time for decisive action is past, and that sweeping famine is inevitable as population increase outstrips the available food supply. But wholesale famine is not inevitable. I am convinced that there is time to reverse the situation, if we will but use it. It is the time which has been given us by those who have created the revolution in agricultural technology based on new seeds, hybrid strains, fertilizers, and the intensified use of natural resources.

A Race Against Time

This "green revolution" has already increased the yields of food grains (principally wheat and rice) by more than 100% in parts of South-east Asia, and promises to boost yields by one-half ton per acre throughout Asia. It has expanded the number of acres sown with the new seeds from 200 in 1965 to 20,000,000 in 1968—and an estimated 82,000,000 in 1973—but has yet to touch more than a small percentage of the rice and wheat-producing acreage of the world. If we will but speed the spread of this agricultural revolution—by adequate and properly administered technical and financial assistance to the developing countries—we can expect that for the next two decades the world's food supply will grow at a faster rate than its population.

The predicted spectre of famine can be averted. What is required to accomplish this is not so much a psychologically comforting optimism, as an energetic, creative realism. But I am confident that application of the new technology will dramatically expand the rate of agricultural growth and will buy two decades of time—admittedly the barest minimum of time—required to cope with the population explosion, and reduce it to manageable proportions.

A Role for Developed Nations

How can this best be done?

To begin with, the developed nations must give every measure of support they possibly can to those countries which have already established family-planning programs. Many have. The governments of India, Pakistan, Korea, Taiwan, Hong Kong, and Singapore have established both policies and specific targets for reducing population growth rates and have shown some measurable progress.

Sri Lanka, Malaysia, Turkey, Tunisia, the United Arab Republic, Morocco, Kenya, Ghana, Chile, and more than a dozen other nations are giving government support to family-planning programs, but need substantial technical or financial assistance before any significant reduction in birth rates can occur.

In addition, a number of governments are considering family-planning programs. And in other countries, where governments are only dimly aware of the dangers of the population problem—but would like, nevertheless, to ponder the matter—the developed nations can quietly assist by helping with the demographic and social studies that will reveal the facts and thus point up the urgency of the issue, and the disadvantages of delay.

Technologically advanced countries can make one of their greatest contributions by initiating a new order of intensity in research into reproductive biology. We are still only on the threshold of understanding the complexities of conception, and therefore only at the outer edge of the necessary knowledge to help make family planning in the developing countries beneficial on a meaningful scale.

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And research efforts should range far beyond biology. Demography, as a fully developed science, remains in its infancy. It is likely that fewer than half the world's births are even registered. And while the crude estimates of birth rates almost inevitably turn out to be too low, it is essential that more precise data be developed in those areas where the population problem is the most acute.

Similarly, there is a pressing need for far more research in the socio-cultural aspects of family planning. There is manifestly a great deal more to population planning than merely birth control. Attitudes, motivation, preferences differ from country to country, and this essential research can clearly best be conducted locally. The developed nations should be generous in their financial support for such studies and surveys.

Above all else, there is a need to develop a realistic sense of urgency in all countries over the population problem. It is essential, of course, to recognize the right of a given country to handle its population problem in its own way. The developed nations can point out the demographic facts; can explain the economic realities; can warn of the consequences of procrastination. They can—and should—inform. They should not—and cannot—pressure.

The Choices Ahead

Programs are beginning to show progress in limited areas. But no reduction in birth rates has yet been achieved anywhere in the underdeveloped areas which can significantly affect overall world population totals. This means that family planning is going to have to be undertaken on a massive scale. Other massive efforts in our century—for example, in the field of public health—have been mounted and have been successful. And granted all the difficulties, there is no insuperable reason this one cannot be. But time is running short. What we must comprehend is this: the population problem *will* be solved one way or the other. Are we to solve it by famine? Are we to solve it by riot, by insurrection, by the violence that desperately starving men can be driven to? Are we to solve it by wars of expansion and aggression? Or are we to solve it rationally, humanely—in accord with man's dignity?



DEVELOPMENT, SOCIAL JUSTICE, AND FAMILY SIZE

By James P. Grant and William Rich



James P. Grant



William Rich

Developing countries that wish to stabilize their populations, write the authors, cannot depend on family planning programs alone. Such programs are effective, they argue, only in conjunction with social reforms and economic advances that offer hope of a better life. Their article is abridged from a Headline Series symposium entitled *How Many People?* published by the Foreign Policy Association.

James P. Grant is president of the Overseas Development Council, an independent research organization seeking to increase American understanding of the problems faced by the developing countries. Earlier he served as an assistant administrator for the Agency for International Development (A.I.D.) and director of its programs in Turkey and Ceylon. William Rich, formerly an associate fellow of the Overseas Development Council, is currently at the Stanford University Law School.

There is a growing consensus that most developing nations would benefit from a lower rate of population growth, with the ultimate goal of a stable population level. How can this best be achieved? In our view, family planning services, although essential, are not enough. What is needed is a combination of such services with economic growth and with a more equitable distribution of the benefits of economic and social progress. Recent evidence increasingly suggests that such programs are desirable and probably necessary "allies," each serving to reinforce the others.

This conclusion has far-reaching implications for all persons concerned with the need for controlling the population explosion and for achieving population stabilization at the earliest possible date. In many developing countries it means that effective land reform programs may be as important as vigorous family planning programs in achieving a reduction of rural birthrates. For inhabitants of developed countries such as

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the United States, which desire to help reduce birthrates in developing countries as well as in their own, support of those trade and aid policies which encourage development may be even more important than support of family planning programs.

Much writing and research have been devoted to the adverse effects of rapid population growth on human well-being. The population explosion is the principal reason why, despite historically unprecedented increases in national output in recent years, most less-developed countries have minimal improvement in per capita income, growing unemployment, a continued high level of illiteracy and poor health, a widening income gap between the poorer half of their population and those relatively well-off, and increasingly serious environmental problems.

A Problem of Motivation

Far less attention has been given to the consequences of different patterns of economic development on birthrates. Demographers have long known that with sufficient economic progress, as in Europe and North America, high birthrates fall sharply. But since this reduction in births occurred over a period of more than 50 years and at relatively high income levels, it seemed to have little relevance to most developing countries.

Demographers also have generally recognized that widespread poverty tends to sustain high birthrates for the obvious reason that families living without adequate employment, education or health care have little security for the future except for reliance on their children. Despite the major reduction in deathrates in the past two decades, many persons in poor countries still perceive—often rightly so—that having numerous children is advantageous, both for immediate social and economic reasons and because of the persisting risk that offspring will not survive to adulthood. These high birthrates, in turn, make social problems worse.

The crucial question, therefore, is how the great majority of families can break out of this vicious circle. Recognizing the fact that their social and economic difficulties worsen as population growth continues unrestrained, many developing countries have begun family planning programs to improve means of limiting family size. But a troublesome problem remains: these programs have for the most part been accepted by families which are relatively affluent or already have too many children, or by women in ill health. Unless there is greater acceptance of the need for fewer children by the *majority* of families, efforts to stabilize population growth will fail. Therefore, if developing countries are to escape the threats posed by rapid population growth, more families must not only be provided with means to limit births but also acquire the motivation to do so.

Development, Social Justice, and Family Size

The experience of Europe and North America during the past century—a general reduction in birthrates after incomes became relatively high—was long thought to be the norm, in the absence of family programs, for other countries as well. However, there now is striking evidence that in an increasing number of poor countries, as well as in some regions within countries, birthrates have dropped sharply *despite* relatively low per capita income and *despite* the absence or relative newness of family planning programs.

Preliminary examination of societies as different as China, Barbados, Sri Lanka, Uruguay, Taiwan, the Indian Punjab, Cuba and South Korea suggests a common factor. In all of these countries, a large portion of the population has gained access to modern social and economic services—such as education, health, employment and credit systems—to a far greater degree than in most poor countries or in most Western countries during their comparable periods of development. Not only have birthrates dropped noticeably in most of these countries *before* introduction of major family planning programs, but such programs seem to be much more successful in those countries which have assigned high priority in their development programs to a more equitable distribution of income and social services.

Development Strategy

There are many reasons why birthrates are affected by improved welfare. The spread of education contributes to the motivation for reduced family size. Education and literacy make information about birth control techniques more accessible. More important, changes which occur in the values of educated persons, as they learn to question traditional practices of their parents, affect their attitudes toward family size. The correlation between small family size and female education is particularly high; as women gain independent social status, they become increasingly active outside the home and are inclined to limit family size as a result. Moreover, extended education tends to delay marriage. It also generally lengthens the period during which the child is dependent on parental support. As education becomes available—at some cost—many parents will have to decide whether to have fewer children with, or more without, an education.

While it is true that health services, accompanied by improvements in nutrition, sanitation and education, have helped to reduce death-rates, it is also certain that expanded health services contribute, albeit more slowly, to birthrate reduction. Families are not likely to limit births unless they can be sure of high survival rates. In many parts of India, for instance, where social, economic and religious factors virtually require having a son alive at the time of the father's death, it has been necessary to bear six children to be relatively certain that one male will survive.

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Availability of employment is another factor which influences the birthrate. Fulltime employment is often the key to other opportunities for improved welfare. When only marginal employment is available—such as peddling in the cities or harvest work in rural areas—families may consider it necessary to have as many children as possible to contribute to family support. On the other hand, if women can find jobs, they are more likely to postpone having children, or decide to have only one or two. Sending children to school instead of to income-producing work can also affect motivation for family size.

The factor which may do the most to create an environment favoring smaller families is the expansion of interests and satisfactions beyond the family unit. A couple living in poverty, without fully productive jobs, without economic and social aspirations or a sense that they can contribute to the progress of the society, may well find childbearing and rearing the most rewarding experience in life. The perception by both women and men that one can improve one's well-being, or that of the whole community, will not in itself change the value of having children. However, such additional routes to human satisfaction may increase the motivation for having smaller families.

This brief description of some of the factors associated with fertility indicates the complex interrelationship of socioeconomic factors with the birthrate. Every family faces its own set of perceived social or economic alternatives as well as a wide range of fertility decisions. At this stage it certainly is not possible to define the relationship between development and population growth in precise mathematical terms. Research has made it possible, however, to identify the ingredients in this relationship.

Educational Levels and Health Systems

A look at the relationship of education levels to fertility illustrates this approach. In most developing countries, the majority of the population has little, if any, education, and the birthrate is high. Changes in family size among those who are relatively more educated cannot be expected to have much effect on the population growth rate, because this small segment of the population already shows a lower than average number of births per family. A related factor is the country's broad educational strategy. South Korea, for example, allocates 52 percent of its educational funds to elementary schools and only 14 percent to universities. In contrast, Brazil allocates 29 percent of such funds to elementary schools and 40 percent to universities. These different emphases may serve to explain, at least in part, why South Korea's birthrate dropped from 3 percent in 1958 to 2 percent in 1971, while in that same period Brazil's birthrate dropped from 3 percent to 2.8 percent.

Development, Social Justice, and Family Size

Only when a large portion of a national population gains access to modern social and economic services—such as education, health, employment for women or credit for modern farming techniques—are reductions in family size likely to follow. In countries which follow development policies that result in a relatively equitable distribution of health and education services, and provide land, credit and other income opportunities, the cumulative effect seems to be that the poorer half of the population is vastly better off than it is in countries with equal or higher levels of per capita gross national product but poor distribution patterns. This has helped make it possible for such low-income countries to reduce birthrates to a level not reached in most countries until much higher national per capita incomes had been attained.

Alternative ways of delivering social services figure importantly in determining whether or not a development policy has significant impact on the low-income—and high birthrate—majority of the population. The contrast in health systems between Sri Lanka and Turkey demonstrates extreme differences in the delivery of medical services. Both Sri Lanka and Turkey, for example, devote about the same level of per capita public funds to health services. In Sri Lanka, however, the emphasis has been on training paramedics, who have delivered basic modern health care to the entire rural and urban population. The improvements in national health in the last two decades have been dramatic. In Turkey, on the other hand, efforts have been made to copy Western health systems. While affluent urban families obtained readier access to a modern hospital and a well-trained doctor, in most rural areas there still were more than 10,000 residents per doctor, and few paramedics were available to supply minimal health services. The infant mortality rate remained over twice as high, and life expectancy much less than, the comparable figures for Sri Lanka, despite Turkey's far higher per capita income. Turkey's birthrate remains at a high level.

Social Justice and Fertility

In agriculture, alternative strategies may be equally successful in increasing production but have vastly different social consequences. Many developing countries have enjoyed the benefits of the Green Revolution, the agricultural breakthrough which has yielded vast increases in grain production. In some of these countries, however, improved wheat harvests have contributed relatively little to alleviating rural poverty, because owners of large-scale, capital-intensive, irrigated farms were by far the largest beneficiaries of the new wheats. In one Latin American country over a ten-year period the number of landless laborers increased 43 percent, while the average number of days worked each year dropped from 194 to 100.

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In Taiwan, on the other hand, land reform has put strict 7.5 acre limits on individual landholdings. The average farm has only about 2.2 acres. There is also an extensive system of farm cooperatives to provide credit, markets and new technology. As a result, small-scale rice farmers have been able to take advantage of the new crops; they have almost doubled their output in the past 20 years, while at the same time providing more employment for rural dwellers.

A country which distributes goods and services on an equitable basis can bring about improvements in the welfare of the relatively poor on a wide scale even if its total resource availability is low. Thus, in Taiwan, average incomes are relatively well distributed, health services have extended throughout rural areas, and effective primary education is accessible to virtually all of the population. It is interesting to note that Taiwan's birthrate dropped from 46 per 1,000 in 1952 to 31 in 1963, at which time a vigorous family planning program was introduced. It continued falling thereafter to 26 per 1,000 in 1970. In countries where such a comprehensive approach has not been attained, the drop in birthrates has been much less dramatic. Highly uneven distribution of income and social services, religious constraints, and a lack of government support for family planning programs have all contributed to the maintenance of their higher population growth rates.

The experience of recent years indicates quite clearly that more equitable approaches to development, which are so beneficial in increasing the motivation for smaller families, need not be at the expense of economic growth. In fact, those development strategies which provide social justice through making it possible for a farmer or a laborer to work more effectively for his own advancement can actually accelerate growth. Even though this conclusion runs counter to much current thinking, it should not be too surprising. If 20 percent of a poor country's rural labor force is idle, a labor-intensive agricultural strategy putting the unemployed to work should increase production. The additional provision of basic education and health services to farmers generally should increase production further—as well as improve the motivation for smaller families in the rural sector.

The Development-Motivation-Fertility Thesis

Some objections that have been raised to this thesis should perhaps be noted. High population growth rates continue most dramatically in Latin America, for example, despite the region's relatively high per capita incomes, and the most successful examples of rapidly declining birthrates in countries with low per capita incomes are in East Asia. This situation has led many to say that Catholicism is the dominant reason for the former and that Chinese cultural attributes are responsible for the latter.

Obviously, religious and cultural factors have some impact on attitudes toward family size. It must not be forgotten, however, that comparable policies and programs have been shown to have roughly comparable effects in different religious and cultural settings. Thus Catholic France has long had low birthrates, and the relatively more prosperous Catholic north of Yugoslavia has a significantly lower birthrate than Yugoslavia's much poorer Muslim south. With regard to the alleged greater Chinese cultural willingness to shift toward smaller families, it bears remembering that similar improvements in education, health, income and jobs have apparently had roughly comparable effects on the Sinhalese in Sri Lanka, Indians and Tamals in Singapore, Blacks in Barbados, Cubans and Uruguayans in Latin America and Punjabis in India as they have had on the Chinese in Asia.

A Role for the Developed Countries

While the most basic initiatives and decisions relating to both poverty and population growth must necessarily be made by the poor nations themselves, the policies of the rich nations of the world clearly can affect the progress of the poor countries along the development-motivation-fertility continuum.

The rich countries can play an extremely useful research and support role in this area. An outstanding example of what such outside assistance can do was provided by the sequence of external efforts that led to the Green Revolution: the early identification of the food crisis of the mid-1960's followed by the work of the Rockefeller and Ford foundations in developing new high-yielding grain seeds, and the subsequent large-scale financial support by the U.S. Agency for International Development and other organizations to facilitate the massive introduction of these new seeds and related technology in many countries. External assistance clearly played a very important role in bringing about the Green Revolution.

The developed countries have already made a significant contribution to the population field. Much valuable work has been carried out to improve birth control techniques and to focus attention on the population problem; considerable financial support has been forthcoming for family planning programs in those poor countries that have requested foreign assistance; and the prospects—and justification—for increased financial assistance to these programs seem excellent.

However, if the global population explosion is to be effectively checked, the developed countries must launch far more vigorous efforts on two other principal fronts. First, a major increase in the transfer of resources from rich countries to poor is needed to help the latter accelerate development. It is no accident that, with the exception of China, most of the development—and family planning—"success stories" have taken place in societies with broad access to external resources.

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But there must also be major changes in the ways rich countries relate to the poor countries if there is to be anything like the needed increase in the transfer of resources in the 1970's. Additional sources of foreign exchange must come from trade, investment, aid and, possibly, from such new global sources as the raw materials of the seabed and the foreign exchange made available by the International Monetary Fund through the Special Drawing Rights mechanism.

Second, the developed countries must attempt to insure that the transfer of resources takes place in ways that facilitate rather than deter improved distribution of services and employment patterns in the less-developed countries. When asked to do so, the rich countries can assist in building those institutions that will favorably affect the distribution of income. Land reform, credit institutions and cooperatives are among the elements of such an approach. Effective support should be provided for programs giving all women and men access to at least a primary level of education and to rudimentary health services.

Care should be taken to avoid simply exporting Western health and education systems, but rather to encourage the development of programs suited to local conditions. To develop applicable systems of health care and education, both rich and poor countries should begin a systematic review of some of the more successful programs in these areas that are already in operation in countries as ideologically different as Sri Lanka, Taiwan and China.

Beyond Family Planning

If the developing countries are to escape the threat posed by rapid population growth within an acceptable time period, more families must acquire the motivation to limit births. It is not enough for them simply to be provided with the improved methods to do so. This means that development planners must give far more attention to the effect of alternative development strategies on birthrates. Equally important, those concerned with alleviating population problems need to think of remedies for the population crisis which go beyond exclusive reliance on family planning programs. Policies that bring health, education and meaningful jobs to lower income groups can at the same time contribute toward reducing population growth and accelerating economic growth, and can thus provide a solid base on which to build future development policies. These policies, when combined with large-scale, well-executed family planning programs, should make it possible to stabilize a country's population much more rapidly than reliance on either approach alone.

POPULATION POLICY IN DEVELOPED COUNTRIES

By George B. Baldwin

Discussions of population policy have mainly focused on trends in those developing countries where high birth rates cause serious economic hardships. An important new study turns the spotlight on the developed countries which have already achieved low birth rates.

George B. Baldwin is deputy director of the Population and Nutrition Projects Department of the World Bank. He formerly taught economics at various American universities and worked for Iran's national planning agency as a specialist on educational and manpower problems. He is the author of *Industrial Growth in South India* and *Planning and Development in Iran*. His article is excerpted from *Finance and Development*.



1974 is World Population Year and many of us will be taking a total immersion course in popular demography via a flood of publications, speeches, and conferences. By the end of the year we may all be a bit weary, but hopefully wiser and more dedicated. But "dedicated" to what? Among other things, to the cause of reducing fertility in the less developed countries—so that they may become, demographically, more like the developed countries.

Before we wish for that, it is worth knowing more about current population policies in the industrialized nations. For those who want to learn about this—quickly, conveniently, and authoritatively—McGraw-Hill Book Company has published an informative volume of essays entitled *Population Policy in Developed Countries* edited by Bernard Berelson, the noted social scientist and former president of the Population Council. There are chapters by national experts on 25 countries, 14 with a population of 20 million or more, plus 11 smaller countries of special interest. The coverage is nearly complete—more than one thousand million people who include 95 percent of the population in countries with per capita incomes of US \$1,000 or more.

Dr. Berelson reminds us that a developed country is "industrialized, healthier, better educated, better off, more 'modernized'" and, "as it happens, ... distinguished by low fertility." All 25 countries have

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"a common demography: low growth rates and among the lowest birth and death rates in comparison with the developing countries." Although total fertility rates in at least a third of the countries are at or below replacement, this does not mean that population growth in these countries has yet fallen to zero or lower. But in seven or eight countries, populations will stabilize in a decade or two unless recent fertility trends reverse themselves or are offset by immigration.

Defining "Population Policy"

Population policy can mean many things. A narrow definition would limit population policy to "policies explicitly adopted by governments for their (presumed) demographic consequences." A broad definition would include not only these explicit policies but any government policy, adopted for whatever other purpose, that does in fact influence such factors as total population size, births, deaths, migration, geographical distribution, and population composition. Neither definition is very satisfactory, since "the narrow definition of explicit intent... misses the major demographic consequences of government action," while the broad definition "runs the danger of including virtually all governmental actions."

Dr. Berelson and his colleagues have tried to steer a pragmatic middle course by dealing with (1) policies that are intended to affect demographic events directly, (2) policies that are taken primarily for other reasons but with some consideration of demographic factors, and (3) policies taken without explicit demographic intent but with important demographic consequences.

In his concluding chapter Berelson highlights several major themes that emerge from the 25 country reports. All countries, he notes, have tried hard to reduce mortality, and with great success. (As recently as 1900, for example, the infant mortality rate in the United Kingdom was about 150 per thousand, 30 points above the present rate in Egypt). In a few countries ("but only a few") there is a concern for excess population growth—e.g., in the United States, Britain, and the Netherlands. But in these countries the sentiment for reducing fertility has a different basis from that found in the developing countries—the source of concern is environmental impact, pollution and the drain on natural resources, not the population-drag on economic growth. Overall, however, there are more developed countries that want to increase fertility than to limit it—e.g., Japan, Argentina, France, Spain, Israel, Greece, and Romania. The sentiment is nowhere very strong, but it is unmistakably there.

Taking all 25 countries together, Berelson concludes that "population is not an issue of really high priority in these countries, except perhaps in a few cases seeking to increase fertility." The elaborate pro-natalist family assistance programs which encourage births in so

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many European countries appear to have no influence on fertility. For anti-natalists, the lack of stronger policies for limiting growth may not be all that bad: the best policy—and the best politics—may well be to let sleeping dogs lie, since things seem to be going their way regardless of government policies.

Among people trying to slow population growth in the less developed countries the predominant mood is one of disappointment at the limited effectiveness of providing greater access to contraceptives through the expansion of health networks and commercial promotions. These direct family planning services are relatively straightforward and simple, and they have to be provided.

But the weakness of these activities, *by themselves*, in clearly and strongly reducing fertility has greatly intensified interest in pilot projects designed to make people *want* fewer children, and hence to increase the demand for birth control services. Many of the “beyond family planning” interventions that programmers think ought to be tried in developing countries involve measures that have already been tried in many developed countries. The obvious question to ask is, “what can the experience of the developed countries teach us about what works or does not work if we want to produce certain demographic effects in the less developed countries?”

Ambiguous Lessons

The answer—although Berelson does not explicitly give it—is pretty clear and rather surprising: if the less developed countries want to learn what specific steps they might take to make people want fewer children, they will not learn them from the experience of the richer countries that have already made the demographic transition to low birth and low death rates. Indeed, the developed countries have arrived where they are, demographically, largely without the help of anti-natalist government policies, and often despite quite conservative government policies on the provision of contraceptive services. Even where governments have tried to counteract their populations’ low-fertility behavior, their pro-natalist interventions have had almost no effect.

It would be wrong, however, to draw the conclusion that the developing countries should not bother trying to devise social interventions just because it is so difficult to identify the specific causes of lower fertility in the developed countries. Each developing country will have to experiment in this field on the basis of its own specific circumstances. But the experiences of the developed countries, while they offer no clear answers, may be useful in providing better understanding and a certain historical perspective. In the following notes, based on individual country chapters in the Berelson volume, I have tried to emphasize those points which seem to me most pertinent to the concerns of developing countries.

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United Kingdom

No official policies on population have been adopted but there has been much public and official interest in population questions since the mid-1960's. In 1966 the president of the British Association for the Advancement of Science argued that Britain should have a population of about 40 million, almost 13 million fewer than it then had; and some 90 percent of British biologists attending a special 1969 symposium also felt that the optimum population for Britain has already been exceeded. But contrary views were quickly expressed by other leaders.

In general, activities in Parliament have shown more concern for slowing or reducing population than have experts responsible for planning the future expansion of public services. Public opinion polls show that over two-thirds of the general public feel that the problem of population size is either "serious" or "very serious," which suggests that public opinion is ahead of the government.

Policy decisions would be somewhat easier if long-range projections could be made with confidence. In annual projections since 1955, the Government Actuary has variously put the total for the year 1990 at between 53 million (the current population) and 67 million, depending on the assumptions made about fertility, international migration, and mortality. There is far more uncertainty surrounding future fertility than future mortality and migration. But the long-run growth and "optimum size" problem seems of far less concern to the British government than immigration—recently brought under much stricter control—and geographical distribution. So far as access to birth control (including abortion) is concerned, Britain is among the most liberal countries in the world; since 1972 the pill and the intrauterine device (loop) have been available cheaply under the National Health Service.

Japan

Japan has a land area about 50 percent greater than Britain's but a population nearly twice as large. Its recent population growth rate, while low, is double that of Britain (1 percent vs. 0.5 percent) but there has been much less public discussion of national population policy—the topic is far more sensitive. Official policy is mildly pro-natalist despite the fact that a 1969 commission was the first in a developed country to recommend a policy of zero population growth. Nevertheless, government policy on the provision of contraceptive services and on abortion has been liberal since the abortion reform of 1949.

A striking and well known feature of Japanese contraceptive practice is the very low use of the pill and the loop, which have not been approved for general use although physicians may prescribe them for special reasons. The condom is used by nearly three-quarters of married couples under 50—a much higher figure than in Britain, where condom use is also high but where the pill and the loop are both approved and widely

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used. As in Britain, the dominant population issue in the country is that of geographical distribution, not growth.

The Netherlands

This is another country of high density where population is still growing—natural increase stands at just under 1 percent, with net immigration during the past decade increasing this by 10-25 percent. There have been pronounced declines in fertility during the 1960's, especially—and somewhat unexpectedly—in the Catholic southern part of the country. The reasons are not clear—one of many illustrations that there is still no reliable evidence on the relative importance of the several broad factors underlying fertility. Take, for example, the role of women's employment: the Netherlands has until very recently shown a much lower proportion of its women in paid employment than most other Western European countries—yet fertility has been no higher than in these other countries. The policy toward the supply of contraceptives is liberal (pills and loops are issued free as part of National Health Insurance), but the attitude toward abortion is distinctly less permissive than in either Japan or Britain.

Finland and Sweden

Scandinavia is often regarded as the most “progressive” region of the world in matters of reproduction—what Scandinavia does today others will do tomorrow. Finland and Sweden, with 4 and 8 million people, respectively, have about the lowest birth rates in the world. Neither country has an explicit population policy, but in both, birth control is widely practiced and contraceptives are made freely available by the government (in Finland only since 1972). In Sweden, abortion is regulated more conservatively than in the United States, Britain, or Eastern Europe. Finland adopted a somewhat more liberal policy in 1970, with a tripling in the number of legal abortions performed. Both countries have sex and family-life education programs in the schools.

The most notable feature of both countries is the lack of much public or government concern with issues of national population policies (except for migration). There is a strong feeling that government policies and birth control services should enlarge personal freedom to determine family size and not serve national goals. It will be interesting to see whether this apolitical attitude persists if these countries enter a sustained period of actual population decline.

United States

Although a national Commission on Population Growth and the American Future recommended a goal of zero population growth in an important 1972 report, the government has largely ignored the report and the country has no official policy. There has, however, been a

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revolution in contraceptive practice during the past 10-15 years (and in abortion following a 1973 Supreme Court ruling). Under a well-funded 1970 law, the federal government has rapidly expanded birth control services to disadvantaged groups, rural as well as urban. It was estimated that in 1970 some 80 percent of all married couples in the reproductive ages were using one or more of the "highly effective" methods of birth prevention. This finding applied almost equally to whites and blacks, Catholics and non-Catholics.

As a result of this revolution, the total fertility rate fell to just about replacement level in 1972. (Because of other factors, such as greater longevity, it would still take several decades to reach a stationary population.) As in many other developed countries, immigration continues to play an important role in the overall growth rate. Since private behavior seems to be fulfilling the goal of slower national growth, there may be no great need for a national policy on population.

France and West Germany

France has the highest birth rate in Western Europe, West Germany the lowest. Although both countries have gone through periods of concern over "depopulation," such sentiments, while not strong, have persisted longer in France. Indeed, it is remarkable that in West Germany, where there were fewer births than deaths in 1972 and where the net reproduction rate has fallen below replacement level, there is little or no alarm. There is, however, a new official interest in promoting demographic research—a Federal Institute for Population Research was established early in 1973. The German proponents of stabilization, or reduction, are not pressing the government to enunciate a policy, since the attempt to define one would inevitably be controversial and divisive.

Probably the greatest difference between these two major powers lies in their approach to contraceptive policy. German policy has been far more permissive and today it is estimated that 80 percent of women aged 20 to 45 practice birth control (the same proportion reported for the United States); but the proponents of abortion reform have, as in France, not yet succeeded in liberalizing the law. In both countries, immigration plays a major role in sustaining even their low population growth—in France net immigration in recent years has accounted for about half the growth while in Germany it has accounted for all the growth.

The Goal of Replacement

Dr. Berelson is cautious in predicting the future shape of population policy in the developed world. There have been too many policy zig-zags in the past to be confident of the future. Still, he feels that more and more people are likely to accept the goal of replacement—"up to re-

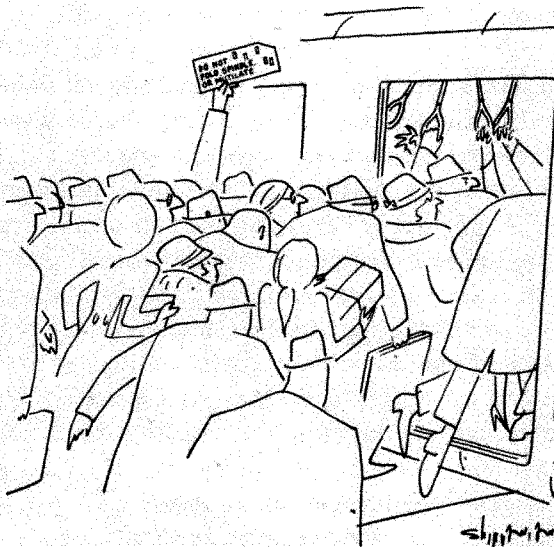
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placement in some countries, down to replacement in others." Such a goal implies an eventual stationary population—reached only several decades after replacement-fertility itself has been reached. Although one can find a few opinion-leaders who would like to see their country's population stabilize at levels *below* the present figure, most advocates of zero population growth accept the idea of leveling off at considerably higher levels than prevail today.

Berelson speculates that the idea of a stationary population, in equilibrium with natural resources, may be gaining "more familiarity and welcome."

There appears to be a growing concern with qualitative population issues now that the quantitative range seems to have narrowed—with issues of population distribution, with the amenities and esthetics of space, with environmental cleanliness, with age structure, even with genetic considerations over the long run.

For the developing countries, such qualitative concerns will generally become major policy interests only after the problem of sheer numbers has come under control.



THE ONE-CHILD FAMILY

By E. James Lieberman

Attitudes toward family size are deeply rooted in custom and in the economic and health conditions of an earlier agricultural stage. But new social circumstances and rising economic expectations, writes the author, are changing traditional attitudes. For many couples, he argues, the one-child family may be the wisest course. Dr. Lieberman is a psychiatrist who heads the mental health project of the American Public Health Association. His article is reprinted from *Development Forum*, published by the Centre for Economic and Social Information of the United Nations.



The population issue is causing people all over the world to consider courses of action which were simply unacceptable in the past. The very idea of population control—that is, the encouragement of voluntary limitations of family size—is highly objectionable in some parts of the world, but is already established policy in others. Technical methods of contraception or references to abortion are inadmissible in some areas, but have become everyday topics of discussion and debate elsewhere. Because of the growing awareness of the world's limited resources, it is becoming conventional wisdom that we should envisage a stable world population at some time in the future.

The problem has many sides—political, social, economic and psychological. Even if births are reduced in some manner, there may well arise the difficulty of dealing with a world populated with a changed age composition—more elderly and fewer young people. This, in itself, is the subject of much speculation and many studies. But the most urgent problems before us in this World Population Year are the ways of stabilizing the growing numbers of people.

One of the perhaps most obvious solutions, but the one which many people in many parts of the world find the most difficult emotionally to accept, is the one-child family. Parents throughout the world hold the deep-set conviction that the one-child family is an unnatural and unacceptable life experience. Nevertheless, non-parenthood, adoptive

parenthood and the one-child family are viable options which are consistent with an awareness of population growth, ecological strain, and equitable use of the earth's resources. Any possible reduction of world population or any attempt to stabilize it at present levels depends on a wider acceptance of one-child families as a social norm. The purpose of this article is to dispel some of the myths which interfere with rational choice.

Myths About the Only Child

"Being an only child is a disease in itself," wrote a renowned psychologist sometime around 1900. According to all available evidence the statement is fallacious now. Probably it was then, too, but it had, and still has, wide popular support. The consequences of widespread belief in such a fallacy are unfortunate both for families which grow larger under pressure of this myth, and for the community which must absorb more children when fewer are needed and wanted.

Why does the myth die hard? Until very recent times having only one child was a probable sign of reproductive dysfunction, or subfertility. Practically no couple would admit to wanting only one child if they had the physical capability for more. Just a few generations ago in the industrialized nations, and more recently in the developing world, high infant mortality made it necessary for a woman to bear two children, on the average, for each one who survived. That fact, plus various religious and cultural norms, put the one-child family beyond the pale of voluntary choice: if you could have more and didn't, you were guilty of moral turpitude, or social irresponsibility, or both.

A second factor is the testimony of only children themselves: "It was awful being an only child. I was so lonely." These sentiments are heard from time to time, and may well be expressed in the larger number of children desired by such a person.

The third factor, a modern version of the first, is the principle of popular psychology that an only child will inevitably be spoiled. This assumption is without foundation in any scientific sense. Its basis—to the extent it exists—is anecdotal. Yes, we can find only children who are self-centered, greedy and whatever else people mean when they say "spoiled." But no one bothers to compare the number of children from larger families who have these characteristics. (Similarly, no one counts up the number of only children who enjoyed growing up that way, and who appreciate the benefits thereof.)

I have often heard rather agonized discussions among young couples who feel they must choose between two children and none, because it would be so bad for a child to be brought up "alone." They are relieved, if incredulous at first, to learn that all evidence points to a good outcome for the only child, with less encouraging prospects as family size increases.

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Studies of Family Size

In his exhaustive survey of studies analyzing the impact of family size and child spacing, published in *Rapid Population Growth*, Dr. J.D. Wray concludes:

The effects associated with increased family size on the well-being of individuals—primarily the children—in a family are varied, but serious: increased illness, including malnutrition, serious enough in younger children to increase mortality rates; less satisfactory growth and intellectual development; increased illness in the parents, as well as clear-cut economic and emotional stresses... It appears that excessive *crowding* of children—too many children too quickly—in a family with a young mother will produce the same effects quickly that excessive *numbers* of children will produce more slowly in larger families.

The studies to which he refers show a direct correlation between family size and optimum health and development, the correlation being negative, i.e., the fewer children, the better the outcome, and the outcome is best for the only child. (This is, of course, a statistical generalization, not an absolute.) The more sophisticated studies answer an objection which is bound to arise: larger family size is associated with poverty, lower socioeconomic status, and poorer medical care. True. But when these factors are controlled, the effect of the family size is still quite significant.

The well-controlled Scottish Mental Survey (1947; published 1953) found the average I.Q. of children with five or more siblings was 91, or 22 points below that of only children. In Candelaria, Colombia, Wray found that 27 percent of children of preschool age had five or more siblings, and concluded that in developing countries today a large proportion of children start out at a great disadvantage in terms of realizing their potential.

Studies of only children are not plentiful, and often the categories "only" and "first-born" are lumped together. Since the only child is by definition first-born and since the first-born is, except in the case of multiple births, an only child for some period of time, the fused category does not distort the picture too much. Also, only children are such a small proportion of the population—probably less than five percent—that a large sample must be used in order to draw statistical conclusions. We know, for example, that eldest and only children tend to be high achievers. They are more likely (i.e., disproportionate to their numbers) to attain high standing academically, to enter the professions, to become eminent, and to be *better adjusted*. And eminent is not the same as being happy or unspoiled. In fact, studies indicate that only children are less likely than others to need child guidance services, even though parents of only children are often deemed overprotective.

The One-Child Family

A different category of research is that which examines family size preferences. Almost everywhere, the ideal family size ranges between two and four children. In the very recent past, extraordinary changes of stated preference have been reported in the United States. From an almost negligible number of respondents wanting zero or one child, the proportion among some college student samples has reached 15 percent or more. Although the smallest family sizes are still less popular, the sudden jump in popularity is highly significant. Doubtless many factors are involved in these choices: the experience in one's own family, cultural norms, economic factors, opportunities for women educationally and occupationally, and awareness of ecological and population pressures.

Starting a Family

In the United States another relevant change has occurred recently in fertility behaviour: widespread postponement of marriage and first birth among young women. The proportion of women remaining single past the age of 21 has jumped over one-third in a few years. This reflects a number of things: better educational and job opportunities for women; more social acceptance of women's independence; the availability of contraception and safe, legal abortion; scepticism about early marriage and parenthood; awareness of the need for preparation for parenthood; awareness of population pressures. Delayed marriage and parenthood is by no means to be regarded as rejection of those central, primary institutional forms. On the contrary, the behaviour of young people in this respect shows greater appreciation of the importance of the family than was shown by their predecessors.

Until recently the usual approach to family planning was to have children until the desired family size was reached and then stop. The new approach recognizes the paramount importance of planning the first pregnancy. From the mental health and marital adjustment standpoints, there has not been any question about this issue: the transition to parenthood is a major life event, perhaps the most important of young adulthood, and yet it has been occurring by accident in the majority of cases until now. Unfortunately, family planning education and services still lag behind need, so that abortion becomes the emergency method used by young women. (Most abortion patients in the United States are first-time pregnant, single women whose contraceptive education takes place after the abortion.)

It is somewhat paradoxical that, although almost all couples want at least one child, until recently the first child has usually been unplanned. By delaying parenthood, couples will have a chance to make a mature decision about whether to have a child at all, how many to have, and how to space them. There can be little doubt that the proportion of non-parent couples will increase as will that of only children.

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The only child is not at a disadvantage in the world of today and tomorrow; on the contrary, he or she is favoured. It is unnecessary to provide a sibling in order to help socialize the first child. For ethnic minorities who feel that there is strength in numbers, let it be said that the conflict between quantity and quality seems to become sharper with the modernization of society, and the increasing importance of educational and economic input, or support, for each child. (Of course, it is wrong for any group to prescribe family size goals for any other group. These are highly personal decisions which must be arrived at with the voluntary consent of the individuals concerned.)

Economic Implications

Economists have recently addressed themselves to the question, "What is the value of a child?" Of course, this is more than an economic issue, but it is very different to contemplate a one-child family in an era of lowered infant mortality, geographic dispersal of the extended family and economic dependence (negative productivity) through adolescence, than in the past, when infants died at a high rate and those who lived worked from an early age and stayed with their parents, indefinitely.

There are those who fear that an only child might die, or turn out badly and, therefore, feel a two-child family is necessary for "insurance." It can be pointed out, however, that the time of greatest risk is the beginning of life, so that parents can be very confident of their child's survival after the first two or three years.

Of course, no one can guarantee the outcome with a given child, but as shown earlier, the chances for success are usually greatest with an only child. Needless to say, parents will have to provide good socialization experience for the only child and they are likely to be in a position to do so. Good nursery schools and appropriate neighbourhood settings will be sought out by such parents. It should be pointed out to those who are nostalgic for large families that siblings are often not the most suitable playmates for each other.

To sum up, there is no good reason to denigrate the one-child family. There are many people who would make good parents for one child, and poor parents for more, or who would be happy with one and less happy with more, or who would make a greater contribution to the community with only one child than with more. Let every couple have the freedom to choose according to their own best judgment. The evidence is that when they are given accurate information, and the means to make choices, people will make fertility choices which are congruent with the stabilization of population.

NUTRITION AND BIRTHRATES

By Roy E. Brown and Joe D. Wray

The authors question the widespread belief that modern medical advances have been the major cause of a falling world death rate and therefore of the current "population explosion." More important, they claim, is improved nutrition for children which in fact leads to lowered birthrates. Their article is reprinted from the January 1974 issue of *Natural History*.

Roy E. Brown is a pediatrician on the staff of Mount Sinai Hospital in New York City and also teaches in the department of community medicine and pediatrics at

the Mount Sinai School of Medicine. It was while working as a pediatrician in several developing countries that Dr. Brown became aware of the connections between malnutrition, family size and fertility rates. Joe D. Wray now lives in Thailand, where he is an adviser to the rural health program of the Ramathibodi Teaching Hospital in Bangkok. He is a member of the biomedical sciences field staff of the Rockefeller Foundation, specializing in pediatric education, child nutrition and family planning.

Most people accept the concept that the population explosion is based on a decline in death rates, not on a rise in birthrates. The literature concerning developing countries is replete with arguments by economists, demographers, sociologists, politicians, and public health officials that, by substantially lowering death rates and thus increasing the number of survivors, public health techniques are responsible for the population crisis. As a result, medical people are now becoming increasingly interested in the technology and mass distribution of contraceptive techniques.

This may not work. Family planning programs are only effective in conjunction with cultural, medical, and personal factors—the most important, in our view, being adequate nutrition for infants and small children.

Is there, in fact, a causal relationship between public health measures and population increases? The development of immunization techniques, antibiotics, and antituberculosis drugs, the eradication of malaria, and improved public sanitation have all been held responsible for declining death rates. There is, however, little evidence to support this; if anything, in many parts of the world such public health measures have made a negligible contribution.

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In the late 18th century, for example, England and Wales experienced a decline in death rates and a corresponding population upsurge, a shift historians have attributed to medical improvements. True, there were larger hospitals, more clinics, and more health practitioners; but aside from vaccination against smallpox, the 18th-century physician had little technology to offer his patients.

Recently, a malaria eradication program in Ceylon (now Sri Lanka) was followed by a dramatic decline in the death rate and an increase in population. Yet falling death rates in Ceylon go back as far as 1905 and show an accelerated downward trend in the late 1940's, completely independent of malaria eradication programs. People who have studied this program conclude that, based on the available evidence, malaria control was not the sole major cause of a population explosion in Ceylon.

Antibiotics, Sanitation, and Malnutrition

What about antibiotics? Certainly, it is the popular opinion that the development of the so-called wonder drugs has played a crucial role in lowering mortality rates. Penicillin was first used in 1944 and broad-spectrum antibiotics became generally available after 1948. In the Western world, however, death rates had been falling since the 1850's, while from 1920 to 1949, death rates in 18 developing countries fell about 35 percent, indicating no causal relationship between the development of antibiotics and lower mortality. Indeed, antibiotics are not even now widely used in the developing countries, owing to their cost and to the shortage of health services.

Improvements in sanitation clearly affect both morbidity and mortality in early childhood. As of 1968, however, the World Health Organization concluded that "safe adequate water was not available to 90 percent of the population of the developing world," which strongly indicates that such improvements have not been important in the declining global death rates.

How is the decline to be explained? Probably the single most important factor is improvement in the standard of living, particularly raised nutritional levels. Over and over in a given population, we find that when death rates start to decline and the number of people increases, there has been a change in the quality and availability of food. It is important to remember that although a given country may be poor, with thousands of its children suffering from malnutrition, the citizenry, over all, may still be better nourished than 50 or 100 years ago.

Conversely, in areas where childhood mortality rates are still high, malnutrition is widespread. Of the world's 60 million annual deaths, 30 million occur in children under the age of five years, and approximately one-half, or 15 million, of these deaths result from the combination of malnutrition and infection.

Nutrition and Birthrates

Improving the general nutrition of a population has a much more marked influence on infant and young child mortality than does increasing the number of physicians or, by implication, improving the medical services. Dr. Harald Frederiksen studied data from 21 generally well-developed countries for the period from 1950 to 1960. He found that infant and early childhood mortality rates declined markedly as animal protein and caloric consumption rose, but only slightly as the number of physicians increased.

Finally, a five-year study of two Guatemalan villages showed that moderate improvements in the nutrition of preschool children produced improvements in health and longevity equal to, or better than, those produced by an extensive and expensive medical care and public health program that did not alter the children's nutritional situation.

Nutritional and Social Progress

Improvements in nutrition can only be achieved in association with other changes. In Western countries, nutrition has been improving and death rates falling for the past two centuries. During this same period, we find the beginnings of stable government administration, reduction of catastrophic famines, the encouragement of food production, and the expansion of road and railway development, which improved food availability. Simultaneously, irrigation programs were developed, and

Co-author Roy E. Brown served as pediatrician in several Asian countries.



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communication and trade routes grew. As elementary education was expanded, literacy increased; not surprisingly, recent studies show that there is significantly less malnutrition among the children of literate mothers.

During the three decades from 1900 to 1930, infant mortality fell dramatically in New York City, from 140 per 1,000 live births to slightly more than 50. This was before there were any significant antibiotic drugs or specific vaccines for diphtheria, whooping cough, and tetanus, among others. The period, however, was characterized by intensive economic and community development, social reform, and educational expansion.

Whether caused by political squabbles, lack of roads, or insufficient storage facilities, inadequate food distribution plays a significant role in malnutrition. With the construction of a new road, the redrawing of political boundaries, or a substantial increase in yearly crops, improved nutritional benefits may result.

The introduction of a new food source can be crucial, and historically, food changes have been associated with rapid population growth. Within 100 years after the introduction of the white potato in 1750, Ireland's population nearly tripled. The recent introduction of enriched flour in Scandinavia was followed by a decrease in childhood mortality, and the Chinese population explosion in the 16th century was related to the expanded use of corn, sweet potatoes, and peanuts.

Impact on Birthrates

But if improved nutrition means that more children survive, won't increased population pressures ultimately lower nutritional status? On the contrary, as infant and childhood mortality rates decline, parents respond by having fewer children; whereas parents are less enthusiastic about family planning when infant and childhood mortality rates are high.

There is, in fact, evidence from Bangladesh showing a direct relationship between the death of a child and the probability of a birth in the family during the subsequent year. A study in an Egyptian community showed that a mother who has lost at least one child will desire a larger number of surviving children and will actually have more births than the women in the same community who have lost no children. In the Philippines, too, a report shows that total fertility is lower in couples who have lost no children; it is also lower in communities where mortality rates are lower.

The relationship between mortality and fertility has been called the "demographic transition." In the West, mortality rates began to slowly decline in the mid-19th century; birthrates followed, also slowly. Over a period of many decades, these countries underwent a transition from high mortality and high fertility to low mortality and low fertility, with net population growth never becoming excessive. Today, however,

death rates in the developing world have fallen rapidly and birthrates continue to remain at high levels. As a result, the demographic transition has not occurred and we have the population explosion.

It should be emphasized that fertility rates declined in the West long before contraceptive technology had approached the convenience or effectiveness demanded today; long before family planning services were readily available; when, in fact, publication of information about contraception could bring imprisonment. At a time when national population policies were unheard of and few were concerned with the long-term effects of population growth, birthrates were falling almost as rapidly as death rates.

This can only be interpreted as indicating that thousands upon thousands of families wanted fewer children and somehow managed to achieve their goal. Their decisions were so successful that the aggregate effect resulted in declines in fertility at national levels. Given the available methods of limiting family size at the time, there must have been powerful and sustained motivating forces at work to produce such unprecedented declines in fertility in large population groups. Such motivation must have emerged from the everyday life situation, from the awareness of problems felt at the family level, such as "having another mouth to feed."

The same has been true in the developing countries; in many instances in which fertility followed mortality downward, there were no formal family planning programs. People were on their own, just as in the original demographic transition. In addition, the time lag is shorter, approaching several years rather than several decades.

When infant and child mortality rates fell rapidly in Singapore after World War II, birthrates were not far behind. In rural Turkey, where infant and child mortality rates declined sharply after a comprehensive medical program was established, fertility rates held steady for several years, then dropped, reducing the net population growth. Analyzing his data from Ceylon, Harald Frederiksen concluded that

[there is] such remarkable correlation between previous levels of the death rates and current levels of the birthrates, that low death rates merit consideration as contributing factors, if not prerequisites, for low birthrates in the less-developed, as well as the more developed countries.

Food and Survival

There is no question that increased family size is associated with increased incidence of illness, and thus mortality, which in turn keeps birthrates high. This has been documented among Indians in the Punjab, as well as among all social classes in the United Kingdom. As families get larger, there are greater economic limitations, more crowding, and poorer sanitary conditions. Children from larger families are

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also more likely to be malnourished than those from smaller families. In developing countries, as laboring men get older, their earnings rise very little, while family size may be increasing steadily. They attempt to compensate for this by spending a larger proportion of their income for food, but in fact, their per capita expenditures for food actually fall, and malnutrition in the children increases.

In addition to family size, child spacing plays a large role. Mortality, both among infants and mothers, is lower when the birth interval is longer. Repeated pregnancies followed by prolonged lactation produce sustained needs for high-quality protein in the maternal diet. Since these needs are poorly met in many parts of the developing world, we find the "maternal depletion syndrome," which contributes to low birthweight infants, poor performance in lactation, and often, early death among women.

The continuing high burden of disease and death in some parts of the world is an effective obstacle to the rapid acceptance of family planning services. To expect people who are faced with high levels of morbidity and mortality in their own environment to rapidly accept family planning is to discount the reality of experience.

For these reasons, it is difficult to check birthrates until better child health care has been established. Economic development and the production and adequate distribution of more food will reduce mortality, even in the absence of any medical input whatsoever. Provided with a constant food supply, each individual will have more food available, thus increasing the chances of survival.

Need for Integrated Services

As long as demographers and economists seek to solve the population problem by emphasizing birth control exclusively, success in limiting population growth will prove elusive. Integrated programs of nutrition, sanitation, and public health services must be incorporated into a country's over-all program for family planning.

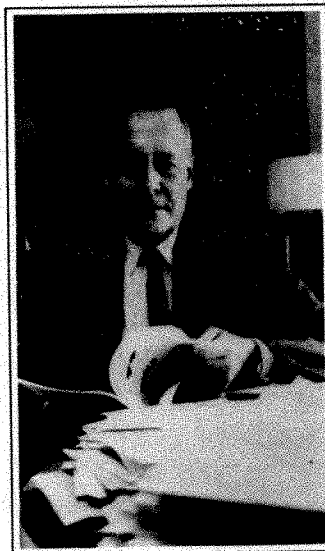
If we wish to limit population growth, the primary thing we must do is to lower infant and childhood mortality rates. When these remain at high levels, fertility will remain high, but when mortality rates decline visibly, fertility will fall within a few years. The most effective way to lower infant mortality rates is to improve nutritional levels. Therefore, the best birth control program is, simply, to feed the children.

WAS MALTHUS RIGHT?

By Roger Revelle

Throughout history, writes a noted scientist, human societies have found ways of circumventing Malthus' inexorable "principle of population"—that only famine, war and disease can keep population from outstripping the available food supply. Today, he argues, we have both the knowledge and the incentive to achieve a balance through more humane methods.

Roger Revelle is professor of population policy at Harvard University and director of its Center for Population Studies. He has served as an adviser to the U.S. government and to the government of India. He is the editor of *Survival Equation: Man's Resources and His Environment* and (with Hans H. Landsberg) *America's Changing Environment*. His article was originally published in a number of U.S. newspapers as part of the experimental program, "Courses by Newspaper," developed by the extension service of the University of California at San Diego.



The most fundamental event of our times is the enormous growth of the world's population in the last 25 years. Over a thousand million more people are alive in 1974 than in 1947. By 1985 there will be still another thousand million, and by the beginning of the 21st century, our planet's population is likely to be between 6,000 and 7,000 million, about twice what it is today.

This seemingly inexorable growth in our own numbers has revived the ideas of an 18th-century English clergyman, Thomas Robert Malthus, who thought that population always will increase up to a level set by the available food supply. "Gigantic, inevitable famine stalks in the rear of misery and vice to limit the numbers of mankind," he said, because "the passion between the sexes" is so great that human beings will produce more and more children, until there is not enough food for all. This was Malthus' "Principle of Population"—that

the power of population is indefinitely greater than the power in the earth to produce subsistence for man, (hence) there must be a strong and constantly operating check on population from the difficulty of subsistence.

In our times, new refinements have been added to Malthus' ideas. It is said that natural resources of metals, fuels, water, and land are

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insufficient to enable most of the earth's present inhabitants, let alone the foreseeable number of people in the year 2000, to even approach the living standards of the rich countries. And even if they could, the resulting pollution and environmental decay would make the earth uninhabitable. Finally, it is argued that rapid population growth is already causing living conditions in the poor countries to become worse and worse.

Let us examine the last argument first. The fact is that over the last 30 years, conditions of life for most human beings in the poor countries have improved moderately. Today's rapid population growth has been caused primarily by a remarkable decline in death rates (the number of deaths each year per thousand people in the population). In many countries the total number of deaths, not just the death rate, is actually lower now than 30 or 40 years ago.

The life expectancy of a newborn child in Bangladesh in 1920 was about 22 years, the same as that of a Roman baby at the time of Augustus, nearly 2,000 years ago. In 1968, the life expectancy was 50 years. This dramatic fall in mortality resulted from a combination of many things—new village wells which gave a safer water supply, improved nutrition, increasing practice of personal hygiene and sanitation, and the availability of antibiotic pills, as well as reductions in malaria and smallpox.

Income and Population

What about food supplies? Although total food production in the poor countries markedly increased between 1935 and 1965, there was a decrease in their production per capita. However, as a result of food imports after World War II, their per capita food supplies actually increased by about five percent.

Since 1965 another change has occurred with the coming of the "Green Revolution"—the widespread use of chemical fertilizers and new varieties of high-yield wheat and rice. Per capita food production in India, for example, has gone up by about 13 percent during the last seven years. Overall economies have also been rising rapidly, at rates corresponding to a doubling of the total production of the less developed countries in 15 to 20 years.

However, per capita incomes are rising much more slowly than gross national products, because the number of mouths is growing so rapidly. Even if their populations were constant, the gap in income between the rich and the poor countries would increase in absolute amount from year to year. The annual increase in the average American's income is more than the total income of the average Indian. But the situation is worsened because the rate of growth of the Indian population is three to four times that of the rich countries.

In this and other ways the rapid population growth of the poor countries is holding them back economically and socially, increasing the burdens of the poor, and frustrating their aspirations.

But, say the neo-Malthusians, these aspirations are hopeless anyway because of the inadequacy of resources for industrialization, and the inevitability of life-destroying pollution if they were to industrialize. To raise everyone on earth to the standard of living of the average European, the total quantity of metals and coal and oil used each year would need to be increased threefold for the earth's present population and about sixfold for the population expected in the year 2000. For metals on a worldwide basis, the required increase in the rate of use does not seem too difficult. We have learned to use lower and lower grade ores, and if we had sufficient energy, we could obtain all we needed from ordinary rock.

But there's the rub—sufficient energy. The United States already faces an energy crisis because demand for oil and natural gas is continually increasing and Americans have used up so much of their reserves. Many of the poor countries have completely inadequate reserves of oil and coal to fuel industrialization. For the needs of both the rich and the poor countries, mankind is entering the age of atomic energy just in time.

The use of all sorts of energy, including atomic energy, brings the danger of pollution. But most pollution can be prevented by the use of still more energy, to clean the sulphur out of coal and oil, to catch the ash from smokestacks, to distribute the waste heat where it will do no harm, and to dispose of radioactive wastes. The quantity of energy required to keep down pollution is probably less than 10 percent of the total energy used.

A Steady Decline

Over the short term, then, the situation of the world's human beings is not so bad. For the longer future, the Malthusian specter still looms like a nightmare. If present rates of growth were to continue throughout the next century, the earth's human population would be around 50 thousand million. Sooner or later human numbers would tend to level off, and the leveling process—resulting from an increase in death rates to match birthrates, mainly because of widespread malnutrition—would be a terrible one.

How can we exorcise Malthus' ghost? We have already done so, at least temporarily, in the rich countries. Birthrates in the United States have declined steadily for the last ten years, and in 1973 reached a net replacement level—the number of births at which the population remains stationary. Similar changes have occurred in the socialist countries of Eastern Europe, among the Slavic populations of the Soviet

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Union, in Northern Italy, Japan, and the Scandinavian countries. If present fertility patterns continue, the numbers of people will eventually become stationary or even decline.

Birthrates are also decreasing rapidly in several developing countries, including possibly the largest country of all, the People's Republic of China, although the evidence for China is fragmentary. Better documented is a sharp decline in human fertility in the smaller countries around the rim of Asia—South Korea, Taiwan, Hong Kong, Singapore, the Ryukyu Islands, and among the Chinese population of Malaysia. Birthrates are likewise coming down in Sri Lanka, Chile, Costa Rica, Guyana, Trinidad and Tobago, and Albania, and in several small island areas, including Puerto Rico, Jamaica, Barbados, Mauritius, and Fiji. In all these countries, there has been substantial social and economic development, based, at least in part, on financial assistance and investments by the developed countries.

Most of the poor people of the world, numbering about 1,800 million, live in eight giant countries: China, India, Bangladesh, Pakistan, Indonesia, Brazil, Nigeria, and Mexico. With the uncertain exception of China, birthrates in these countries are still high, 38 to 40 per thousand or more. At present rates of growth, their numbers will double in 20 to 30 years. In every one of them except Brazil, governments have become alarmed at the population growth and are undertaking family planning and educational programs in an attempt to reduce birthrates.

Limiting Human Fertility

Population control is not new. Malthus' Principle of Population assumed that human behavior is completely determined by biological forces. Yet Malthus himself, in the second edition of his essay, acknowledged a "Principle of Moral Restraint," or the "Preventive Check" on population growth. From the Stone Age to the present, many societies as well as individuals have devised customs, beliefs, and taboos which controlled human fertility at levels far below biological fecundity. Surviving stone-age societies, such as those of the Kung Bushmen of the Kalahari Desert in South Africa, rigorously limit the number of children by practicing infanticide, abortion, various "folk methods" of contraception, and obedience to complex sexual taboos. Indeed, fertility control may have been one of mankind's first inventions. From the standpoint of human welfare, it was more important than the discovery of fire.

The invention of agriculture, some 8,000 years ago, ended the Stone Age. A hundred times more people could live on a square mile of cultivated land than in hunting and gathering societies. The industrial and agricultural revolutions of the last 300 years again increased the possible numbers of people.

In both cases, human populations grew in proportion to the potential-

Was Malthus Right?

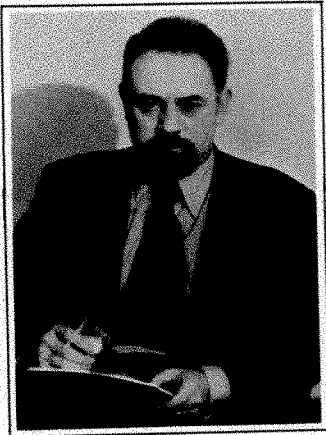
ities of the new environments they themselves had created. But this does not mean that populations always grew without social and individual controls. There is much evidence that birth control was practiced in the Islamic societies of the Middle Ages, for example, and Ireland has kept its population approximately constant, since the famine of the 1840's, partly by emigration, but mainly by late marriage and by a high level of celibacy in both sexes.

It is evident that human beings are quite capable of voluntarily controlling their own fertility, if they believe it is in their interest to do so. Today, such control appears essential. Without it, the chances of any future improvement would be minimal, and the ghost of Malthus would join the Pale Horsemen of Famine, Pestilence, War, and Death in a triumphant ride over the world.



THE ART OF JACKSON POLLOCK

By William Rubin



The style of "abstract expressionism" which dominated vanguard American painting after World War II is inextricably associated with the work of Jackson Pollock, the most widely acclaimed artist of the period. But the author finds that both Pollock's admirers and detractors have accepted misleading myths about his paintings. The following article, excerpted from *The New York Times Magazine*, tries to set the record straight.

Formerly professor of art history at Sarah Lawrence College, William Rubin is now chief curator of painting and sculpture at New York's Museum of Modern Art. He is the author of *Dada and Surrealist Art* and monographs on Picasso, Matta and Frank Stella.

When I began teaching around 1950, we jokingly called introductory art history "Pyramids to Picasso." A decade later this had become "Pyramids to Pollock." To be sure, Pablo Picasso was hardly the most "advanced"—or best—artist in the world in 1950; nor was Jackson Pollock, by the time of his death in 1956. But in their turns, they were the last painters whose work seemed to have embodied whole epochs.

This epochal dimension was not just a question of quality, for that alone would not have sufficed to endow Pollock with the reputation he enjoys today. While I personally consider him the best painter to have reached maturity since World War II, a case could be made in this regard for other painters even within the ranks of the abstract expressionist movement, of which Pollock was a part. Indeed, there are even today a few influential critics who hold Willem de Kooning a superior painter to Pollock—an opinion which was in fact shared by a majority in the artists' community during the 1940's and 1950's when abstract expressionism was in its heyday.

The mythic status of Pollock's work depended more on its particular character and methodology than on its quality. And, of course, it de-

pended upon the public personality of the man himself, the self-image he imposed. All these came together to make Jackson Pollock the symbol both of the coming of age of American avant-garde painting, and of the adventurousness of post-World War II art in general. As in the case of Picasso, it is necessary to separate Pollock's paintings from his myth if we want to form an adequate idea of the work itself, especially the classic "drip" or—as I prefer to call them—"poured" paintings, on which his reputation largely rests.

The Cowboy Myth

Take, for example, the popular image of Pollock as a kind of Frontiersman or Cowboy—the "American" artist *par excellence*. Critics have described Pollock as "the man out of the West," twirling "lariats of color" in the Wide Open Spaces of immense canvases. This myth, which Pollock was not above encouraging by wearing cowboy boots while at home, was particularly popular among European critics, for whom the American national genius is often taken to be that of a kind of Noble Savage inhabiting a "real America" which begins somewhere west of the Mississippi.

There is some basis in fact for the Frontiersman myth. Pollock was born in Cody, Wyoming (home of Buffalo Bill), and though his family left Wyoming the year of his birth, he did spend much of his childhood on farms in California and Arizona. From the ages of 12 to 18, however, he lived in or near Los Angeles and his whole adult life was spent in New York City and in nearby Long Island. "Living is keener, more demanding, more intense and expansive in New York than in the West," Pollock wrote. "The stimulating influences are more numerous and rewarding."

The Cowboy myth has tended to reinforce a variety of misconceptions about Pollock's paintings, among them that violence is a central charac-

Jackson Pollock working with the "drip" or "poured" technique:

"I can control the flow of paint. There is no accident."



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teristic of his art, and that he is a painter of very large canvases. But Pollock's labyrinthine poured pictures have nothing to do with cowboys, lariats or shootouts. Rather they express the energy, flux and molecularity of life in New York. And, to the extent that they simultaneously evoke landscape associations (as in "Autumn Rhythm" and "Lavender Mist," for example), they recall the light and sea setting of Long Island rather than that of the West.

Moreover, Pollock was far from the typically American artist. His painting was more directly dependent on, and related to, the European modernist tradition—such movements as impressionism, cubism and surrealism—than that of some other abstract expressionists. And it is certainly not "American" in the conscious sense that characterizes regionalists and "American Scene" painting of the 1930's—or pop art in the 1960's. "The idea of an isolated American painting," Pollock once remarked, "seems absurd to me, just as the idea of creating a purely American mathematics or physics would seem absurd."

The Myth of Violence

The violence and awkwardness that many critics professed to see in Pollock's mature art—"deeds of incredible violence done with paint," one of them wrote—went beyond the Cowboy myth to establish an image of Pollock as a kind of primitive, both as man and painter. For some foreign critics this seemed his key national characteristic. In Pollock's poured paintings, wrote one, "the violence that feeds on everything typically American... becomes obsessive and unchained."

Yet when we look at the paintings without preconceptions or prejudices, we see a sophisticated, highly complex art that is far from corresponding to this popular image. In Pollock's earlier work, that of 1940-46, there is a certain amount of expressionist anxiety and violence that, in part, reflected his inability at the time to forge a vehicle capable of fully realizing his possibilities. But in the poured pictures of 1947-50, with which he is most identified, this gives way to a supremely lyrical art, choreographically supple and rhythmic. These "classic" Pollocks often exhibit an almost rococo delicacy. Whatever violence they contain is part of a broad spectrum of emotions informed far more by passion, joy, exuberance, ecstasy, delight, gravity, tenderness, suffering, grace, fragility and, at moments, even charm.

Why, then, we may ask, have so many people formed a contrary impression of these works? There are, I think, a number of explanations. First, there is the fact that people do not generally look at pictures with care. (For example, the public considers the faces and postures of Degas's ballet dancers to be "beautiful" when, in fact, they are ugly, strained and awkward—as Degas intended them to be.) In Pollock's case, however, it was even more a confusion of the man with his works. When Pollock was in the grips of the alcoholism that dogged

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Gudmundur Erro, "The Background of Pollock, 1967": Here an Icelandic painter working in Paris places Jackson Pollock in the great tradition of modern art, from Expressionism and Fauvism to Cubism and Surrealism. Erro's canvas reproduces works by such "ancestors" as Van Gogh, Gauguin, Matisse, Grosz, Mondrian, and Picasso.

him most of his adult life, he was capable of a certain violence—largely antisocial, "shocking" behavior—which was widely reported and became part of his myth. But he didn't paint when inebriated. And he had given up alcohol entirely when he executed his greatest paintings.

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The frequent allusion to violence in Pollock's art must finally be understood as a function of the historical context; it was the way people expressed the shock produced *in them* by Pollock's new and unexpected methods and images. The violence that the public thought it saw in the pictures derived from the radical challenge with which these works defied accepted notions of what constituted a painting. In this sense, the situation was similar to that which obtained during the emergence of Impressionism. One must remind oneself when looking at the engaging, luminous pictures of Monet and Renoir, that serious writers of the late 19th century characterized their images as "pots of paint flung in the face of the public," and cartoonists represented the artists as madmen.

The Myth of Size

The association of Pollock's work with the vastness of the American landscape has tended to reinforce the misconception that he was essentially a painter of very large canvases. Pollock did pioneer a new kind of big picture, but monumental paintings remained exceptional for him. Pollock's truly wall-size pictures can be counted on the fingers of one hand. Their seeming ubiquitousness is explained by the fact that they were much exhibited and are now in important museums.

Monumental paintings are hardly a novelty. The Old Masters made numerous large transportable panel pictures and altar pieces, as well as murals conceived for particular architectural settings. In regard to 20th-century art, Picasso's wall-size "Guernica" comes immediately to mind, as do the murals of such Mexicans as Orozco and Siqueiros, and "American Scene" painters of the 1930's. But these modern examples were like the large pictures of the Old Masters insofar as they were *public* images in every sense. They were planned to fit public architectural settings, handled so as to be seen from a distance, their usually political themes were of an embracing order—and their scale and handling were consonant with this.

From its beginnings in late 19th century Impressionism, however, the modernist tradition has eschewed such values, focusing—as would Pollock—on the artist's private experience. With few exceptions until World War II, modernist pictures were easel paintings of modest size.

Pollock's large pictures, then, were more exceptions to the modernist tradition than to the history of art as a whole. But what was really unexpected about them was that despite their large size, they retained an intimate scale, character and handling, a private "speech" consistent with works of easel size. They were felt as "person-to-person" expressions, and were intended for homes rather than public buildings. In apartments, such pictures alter the entire ambience, and the viewer is forced into close contact with them where their subtle nuancing is manifest. In museums, whose neutral environment always involves

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a compromise of sorts, some of this intimacy is lost. And in public buildings, the immense spaces and random audience render the private communion that Pollock wanted absolutely impossible.

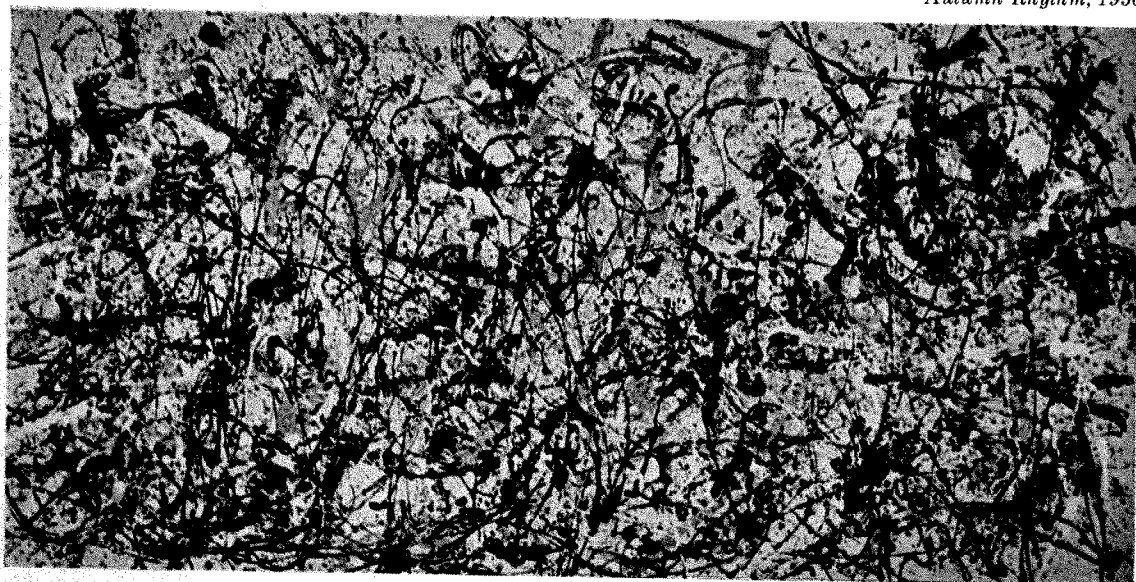
The big picture pioneered by Pollock thus constituted a new category—a hybrid that retained the intimacy and character of the easel painting while attaining the size of a mural. Since such works were entirely abstract and free of perspective illusions, they differed fundamentally from both “Guernica” and the work of the 1930’s muralists. Because recessionary space was eliminated, Pollock’s webs seem to come forward somewhat from the wall, thus enhancing the illusion of their size.

The Myth of “Absolute Newness”

As time has made Pollock’s pictures more familiar, it has somewhat tarnished, though not discredited, another aspect of his myth—what one critic called his “absolute newness.” According to this “meteor” theory, Pollock came to his role in modern painting from out of the blue—certainly from outside the modernist tradition—“demolishing,” as *Art News* put it, “a 2,000-year-old corpus of world style.” Pollock was seen as single-handedly turning the history of art around.

That many of Pollock’s admirers fell victim to such antihistorical hyperbole is in part to be explained as a reaction to exaggerated attacks on his work, which were by no means limited to the popular press. But no more than Cézanne was without roots in impressionism, or cubism without roots in Cézanne, is Pollock unrelated to the earlier tradition of modern painting. Indeed, as Pollock himself said of the advanced painting of his day, “it didn’t drop out of the blue; it’s part of a long tradition.”

Autumn Rhythm, 1950

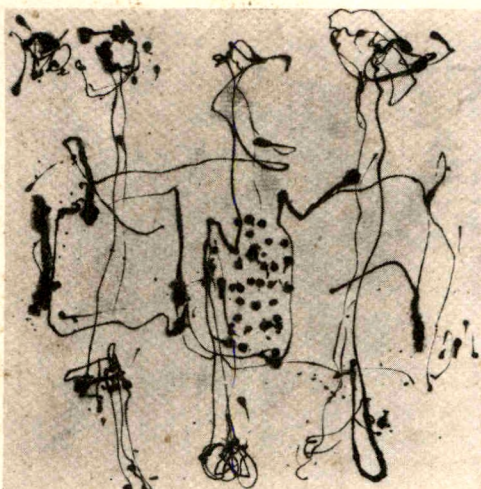


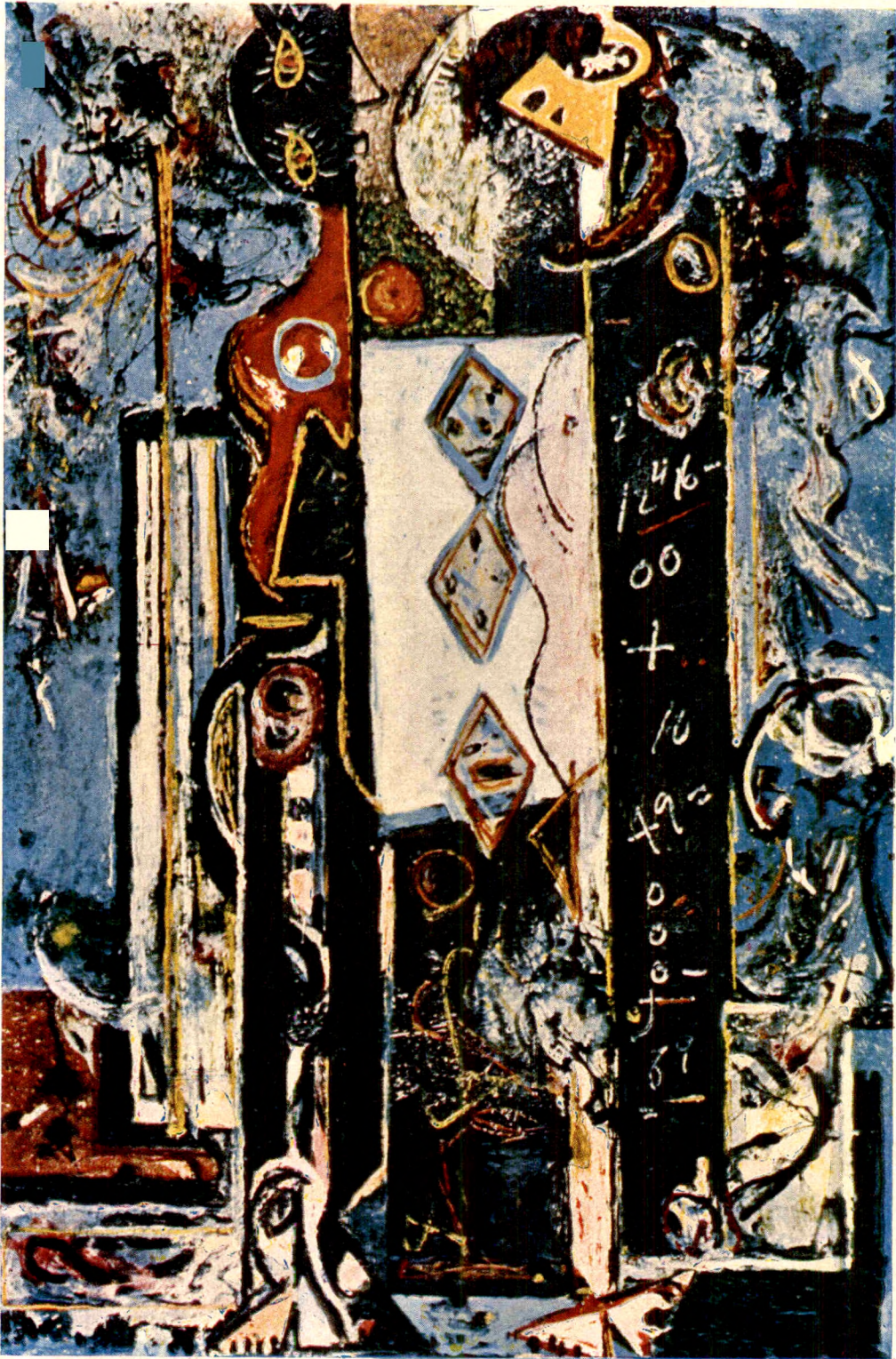
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Jackson Pollock's large canvas, Blue Poles (1953) was painted in 1953 at the height of his Abstract Expressionist period, in the "poured" style that won him world fame. Blue Poles has been called "one of the great masterpieces of 20th-century art" and "a definitive summing-up work of major proportions." It was recently purchased by the National Gallery of Australia for two million dollars, the highest price ever paid for a contemporary painting. The smaller Silver Square (right) reflects the influence of Surrealism and an improvisational approach that was felt to be in touch with unconscious impulses. Such paintings were often started with random "automatic" brushstrokes which were then consciously reworked to achieve an artist's



The Art of Jackson Pollock





Male and Female, 1942

By dissociating Pollock from the past, admirers unable to see beyond the surface novelty of his painting inadvertently reinforced the view commonly voiced by his detractors in the 1950's, that what Pollock created—however interesting—was “not painting.” But one aspect of Pollock's greatness lay precisely in his *not* being a meteoric outsider, in his ability to build simultaneously on such diverse and seemingly irreconcilable sources as impressionism, cubism and surrealism—even in his most radical work. As in the case of Cézanne, Matisse and other great modern innovators, an argument can be made for Pollock as a conservative painter in the best sense of that adjective. Certainly his painting preserved, in a new and vital form, aspects of earlier modernist styles which in themselves had ceased to be viable.

The reader may be surprised to hear impressionism, cubism and surrealism mentioned as sources of Pollock's poured pictures. Because these antecedents were so perfectly fused, so totally assimilated in his pictorial language by the time of his maturity, they are not easily distinguished in the pictures. Some sophistication in modern painting and much careful looking are required to discern their influence. (This is not the case with Pollock's earlier semi-figurative, “totemic” painting of 1942-46, where the debts to Picasso in particular, and to a lesser extent the Mexicans, Miró, Masson and others are easily identified.)

Impressionism was the point of departure in modernist painting for what, in Pollock's time, came to be known as “allover” composition. It gave him a precedent for atomizing the surface of his pictures into a multiplicity of approximately even-textured accents that emanate a flickering, scintillating light. However, the basic elements of Pollock's compositions were more immediately indebted to late analytic cubism and its extrapolations in Mondrian's “plus and minus” pictures, for example. That Pollock's drawing was largely curvilinear makes this kinship difficult to perceive. But cubism was more than a matter of straight lines, and Pollock's shallow and yet indeterminate space and the way his web-like patterns relate to the painting's frame ultimately derive from that seminal movement.

The Myth of “Accidental” Painting

The influence of surrealism had been considerable on Pollock's early work. What remained of it in his poured style was essentially the method known as “automatism”—an exceedingly rapid, improvisational kind of drawing, which was felt to be particularly in touch with unconscious impulses and instincts. The surrealists often began their pictures by letting the pencil or brush wander “automatically.” From these marks they gradually invoked some form of recognizable image, and proceeded consciously to endow the picture with an artistic order. Indeed, in his early paintings, such as “Guardians of the Secret,” Pollock arrived at an iconography of totemistic and symbolic figures in a not unrelated manner.

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But in his poured pictures, his rapid improvisation went far beyond anything surrealist automatism had proposed, all the while remaining entirely abstract. In spite of their total nonfiguration, however, these poured Pollocks were imbued with a poetic and visionary cast that markedly distinguished them from the more "rational" abstraction of the European pioneers. It is as if the symbolic figures of his early work had gone underground, beneath the new abstract fabric, from whence they continued to inform the paintings' spirit.

Pollock's pouring method appeared to the public—and many critics as well—to produce an image that was essentially accidental, hence inherently inartistic. But Pollock had extraordinary control over his new battery of techniques: pouring, dripping, spattering, imprinting the canvas with his hand or with a paint-drenched stick or slat, and even squirting from basting syringes. He himself said, "I can control the flow of paint. There is no accident." Nevertheless, even a cursory glance at a poured Pollock shows that on a purely operational level this was not entirely true. There are numerous small spots and puddings which were manifestly not fully determined as they happened. But these were accidental only then; by the final state of the work they had been transmuted into esthetic decisions. Let us see how this happened.

Pollock adopted the pouring technique so that he could spontaneously draw extended, unbroken lines *in paint*, something that cannot be done with a brush. While pouring his design entirely in accordance with his will, he had to confront the fact that his technique entailed a margin of accident—unexpected marks or puddings. Three possibilities were then open to him. First, if the accident were unfortunate, it could simply be covered over. Secondly, the accident just might contain the germ of a possibility that had not previously occurred to him, in which case he could build on it improvisationally. The structure of the picture would then change, as the accident was organically assimilated into the pictorial fabric. Finally, Pollock might just let the accidental mark stand, because he felt it was good for the picture—which is as much an esthetic decision as painting it out. Thus, to whatever extent the markings on a Pollock are not results of the initial impulses of his will—and most of them certainly are—they finally represent not accidents but responses to them.

A Reflection of Modern Life

One might fairly ask, nevertheless, whether the quality of such works can equal that of the Old Masters, whose pictures were laid out in advance and free of such "process" accident. Yet there is no reason, esthetic or philosophical, why Pollock's incorporation of controlled accident should necessarily disadvantage his art vis-à-vis older styles. Indeed, great works from many periods can even absorb a modicum of truly random accident—the ravages of time, for example—without losing

their greatness. The notion that a single line or spot on some great masterpiece cannot be changed without spoiling it is an art-historical piety.

In fact, Pollock's confrontation, absorption and, finally, transcendence of accident is precisely the guarantor of his special relevance, given the immense role played by unpredictable events—unexpected convergences and collisions—in the denouements of modern lives. A successful modern life, like a successful Pollock painting, is made coherent by decisions which maximize the favorable possibilities and minimize the unfavorable effects of myriad chance events. The carefully planned and predictably executed works of Renaissance masters reflected the more stratified, more formally ordered character of 15th-century life. Pollock's improvised order, which absorbs the maximum of randomness and accident consistent with meaningful structure, is as true a "picture" of our life—especially as lived in a great metropolis—as Florentine Renaissance pictures were of life then. In both cases, however, the paintings reflect an ideal order rather than the actual conditions that prevailed, for life itself cannot have the completeness, equilibrium and finality of art.

Pollock's Influence

If we go beyond the intrinsic quality of Pollock's pictures to the question of his influence on later art we find another myth that needs exploding. Contrary to an impression widely held even during his lifetime, Pollock's poured paintings had little direct effect on his contemporaries—except, broadly speaking, to encourage radical solutions. Pollock's influence was felt primarily by painters such as Morris Louis, Kenneth Noland, Frank Stella, Jules Olitski and Larry Poons, whose work had little outward resemblance to Pollock's. These artists searched below the surface appearance of the poured pictures and abstracted from them certain basic ideas, such as alloverness, synoptic unity, symmetry and frontality, while bypassing Pollock's technique or "look."

Even, however, if we add the influence of Pollock's work to its great quality and daring, and combine these with the colorfulness of the man himself, we fall short of a sufficient explanation for the immense proportions his myth has taken on. And at this point, it would be idle to overlook the role of the well-publicized, record prices his paintings have consistently obtained since his death in 1956 at age 44. Take the recent purchase of "Blue Poles" for the staggering price of \$2 million by the National Gallery of Australia. It may well be that no picture in the history of art has acquired monetary value so quickly.

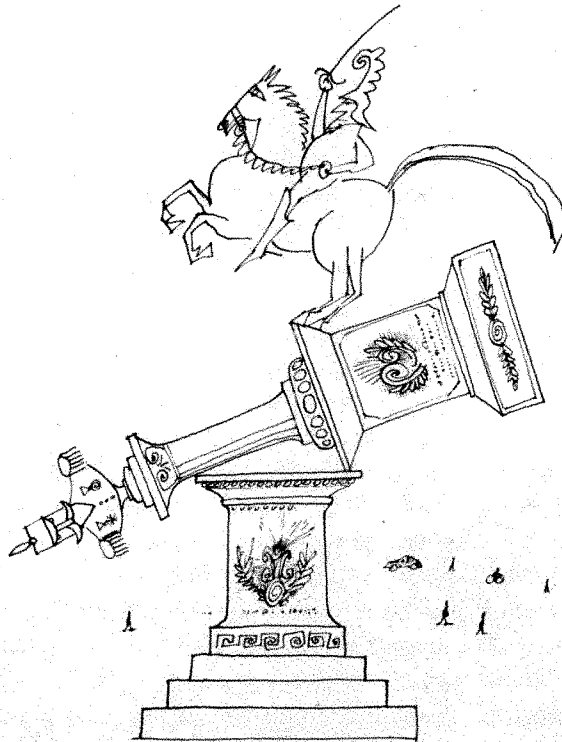
The problem the Pollock myth presents is not that his best work has been overestimated but that his whole *œuvre* tends to be accepted uncritically. Pollock was a great and noble painter, the author of a number of unique masterpieces. Like Mondrian, but in the opposite direction, he showed how far one could go and still make a painting—in the most

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rich, complete, profound and traditional sense. But he was not a Picasso or Matisse. Pollock's career was too short, and the number of his great pictures too few, for such stature.

The popular inflation of the myth, however, turns on more than just the news value of high prices. Some of it, I think, has also to do with the man—and therefore has spiritual implications. Admittedly, most of the people who were excited to hear about the sale of "Blue Poles" had never actually seen it—or perhaps any other Pollock, for that matter. But I cannot help thinking that a number of these people have had at least faint intimations of something more important—namely, that man has once more cheated mortality.

The great emphasis our society places on art would seem to support André Malraux's contention that it has supplanted religion as our last line of defense against death. History tends to confer on great artists—from Rembrandt to Picasso to Pollock—an immortality more secure than that of most of the leading princes, politicians and generals of their times. It seems to me not improbable that many generations hence, millions around the world will know the name of Jackson Pollock.



Drawing by Saul Steinberg. From THE NEW WORLD by Saul Steinberg, published by Harper & Row, Publishers, Inc. © 1960, 1961, 1962, 1963, 1964, 1965 by Saul Steinberg.

THE CURSE OF BABEL

By Einar Haugen



How should nations deal with minority languages or dialects within their borders? Citing the examples of the United States and Sweden, the author argues that bilingualism offers the most humane way to bridge the communication gap and "mitigate the curse of Babel."

Einar Haugen is professor of linguistics and of Scandinavian languages at Harvard University. He is a former president of the Linguistic Society of America. His books include *Bilingualism in the Americas* and a forthcoming *History of the Scandinavian Languages*. His article is abridged from the Summer 1973 issue of *Daedalus* devoted to "Language as a Human Problem."

There is, in Genesis, an intriguing tale about the origin of language diversity, well known as the "Tower of Babel" story. We are told, in the King James Version, that "the whole earth was of one language, and of one speech." But then pride fills the hearts of men, so that they are misled into trying to build "a city and a tower, whose top may reach unto heaven." The Lord Jehovah comes down to earth and decides to punish this presumption, perhaps worried that men might usurp His omnipotence, for "now nothing will be restrained from them, which they have imagined to do." In His infinite wisdom He proceeds to "confound their language, that they may not understand one another's speech." They are no longer able to cooperate in the building of their tower, and are "scattered abroad upon the face of all the earth."

Similar stories are known from other cultures, but among the Hebrews the story was associated with the name of Babylon, which, by a false etymology, was understood to derive from a verb *bālal* meaning "to confuse." Babylon, as the capital of the Babylonian and Assyrian empires, was a big and sinful city in the eyes of the rural and severely religious Hebrews. The story not only explained why the towers of Babylon had crumbled, but more important, it answered the question thoughtful men and women must have asked everywhere: why is it that all men have languages, but all so different? In the multilingual Near East the natural

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answer was: the diversity was a curse laid upon men for their sinful pride.

Those of us who love languages and have devoted our lives to learning and teaching them, and who find in language a source of novel delights and subtle experience, find it hard to put ourselves in the right frame of mind to understand the conception of language diversity as a curse. Yet we need only find ourselves in a country, say Hungary, where every sign looks like an abracadabra, and speakers shrug their shoulders at our efforts to communicate, to sense some of the terror of isolation that underlies the Hebrew view. As linguists, however, we are entitled to offer one basic correction to the Biblical tale: men were not scattered abroad because they could not understand one another's speech. They could not understand one another *because they were scattered*; in the story cause and effect have been turned around. When men are separated by barriers of time and distance, their languages deviate in regular, if sometimes, astonishing ways.

Language and Biology

The reason for this is clear: language is man's most distinctive and significant type of social behavior, and is, like all social behavior, learned anew by every child. The child not only can, he *must* learn whatever language is spoken around him. In learning it, however, he never learns it exactly like those from whom he heard it. His "creative imitation" (as we may call it) is not identical with its model, since it is not turned out in a factory, but is a piece of human craftsmanship. The gift of language is certainly innate and instinctive, but human speech differs from the music of birds precisely by being diverse and relatively idiosyncratic. What keeps it from being totally idiosyncratic is that each act of communication forces the communicators to monitor their expression by the response of those they are trying to reach. When one group ceases to communicate with another, the groups drift apart and develop their idiosyncrasies, which linguists call idiolects, and as these accumulate, they grow into dialects, and languages, and language families.

The historical and social parallel between linguistic and biological inheritance has often obscured the fundamental difference between them. Races and languages have been confounded to the detriment of both, leading to a type of linguistic racism which is the true curse of Babel. Linguists know better, but they are not without fault in having developed a terminology that speaks of "language families" and "mother tongues," the "generation of dialects" and the "descent of words." These are all metaphors that can be drastically misleading, for there is nothing at all in language that is identical with biological descent.

When linguists say that English is "descended" from Germanic and Germanic from Indo-European, they are only saying that there has been an unbroken transmission of speech habits all the way back to that

tribe of conquerors who issued from the Caucasus or wherever, some five or six thousand years ago, and succeeded in imposing their language on most of Europe, on much of Western Asia, and eventually on America, Australia, and other parts of the world. At every step of the way there were children who learned the language of their elders in their own way, and there were adults who learned and unlearned their languages to meet the demands put upon them by social and political necessity. There are no genes; there is only learning.

That *learning* is the key to every language problem is so obvious as to be almost a truism. But there is one condition that I have observed over and over in various societies, without having heard of research upon it. This is the cross-fire of mutual criticism and correction within a close-knit social group. As children we have all felt the taunts that were directed at us when we deviated from the valid norms of speech. Children are cruel in applying laughter and ridicule to those who speak "differently." As they grow older, they become aware that linguistic deviation is an index to social distance. As adolescents they discover the difference between upper and lower class, the significance of belonging on this side or the other side of the tracks, and the speech mannerisms of the current peer-group hero as opposed to those of their obsolescing parents. As adults they have internalized these norms to the point that they register automatically, not that somebody's language is deviant, but that a speaker is "vulgar," or "stuck-up," or "foreign," and behave toward him according to these identifications. Wherever such identifications lead to antagonism or prejudice, to the exclusion of outsiders, or to the denigration of individuals, there I would find an example of the curse of Babel.

The Problem of Bilingualism

The gradual drifting apart of languages and dialects is a natural and inevitable consequence of the drifting apart of mankind. The Hebrew legend was surely right in assuming that all men were once of "one language and of one speech." I cannot find any other hypothesis adequate to account for the basic similarities of all known natural languages. In this sense the tower of Babel is a profound symbol for man's ultimate unity and for his common descent as a talking animal.

In their efforts to remove God's "curse," men have resorted to various policies, ranging from neighborly tolerance to rigid isolation, from eager acceptance of a new language to brutal suppression of its speakers. Out of this crucible of language contact has come a class of speakers who can manage more than one language, the multilinguals or polyglots. To simplify our expression we shall call them all "bilinguals" and define them as "users of more than one language." To use a language does not necessarily entail mastering all its skills or its entire range: often it is enough to understand it when spoken, or to read it when written.

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There is a vigorous flurry of interest these days in bilinguals and bilingualism in the United States. Some of us would say: about time. This country has had bilingual problems since its inception and has always taken it for granted that with time they would go away. The present interest is triggered by many factors: militancy among black and Spanish-speaking Americans, sensitivity to minority problems, and faith in the power of education to overcome internal discord. Linguists, sociologists, and educators have been mobilized to implement the U.S. Bilingualism Act of 1968, which recognizes for the first time in American history that "the use of a child's mother tongue can have a beneficial effect upon his education." Black English and Chicano Spanish (spoken by Mexican-Americans) have emerged as valid and highly productive subjects of study by linguists. Ethnic groups are being urged to maintain their identity by teaching their native tongue to their children. Bilingual schools have been established in a number of communities where large blocs of non-English speakers live.

We are hardly unique in the world in having such problems. What is unique is that in our time a great many populations which speak minority languages are refusing to accept the status of second-class citizen in the countries they inhabit. Such a refusal could not arise as long as most peoples were locally bound as hewers of wood and drawers of water. We rarely hear of language problems arising in the Middle Ages or in the Czarist Empire.

Only when governments instituted universal school systems, which in Europe was in the 18th century, did language become an explosive issue. The schools brought into age-old local communities a force for linguistically homogenizing the population, for "mobilizing" it for participation in national life, opening opportunities and imposing responsibilities that had never before been imagined. But this mobilization also had the effect of plugging the entire population into a network of communication that was expected to function fast and efficiently, which it could not do unless one language rather than many was spoken.

The Example of Sweden

To illustrate the resulting problems and to offer a parallel with the American situation let me take you to a remote corner of Sweden, the province of Norrbotten, at the top of the Gulf of Bothnia. Sweden, like other Scandinavian countries, is often viewed as a highly homogeneous society with a successful social policy that insures equality and prosperity for all. But in Norrbotten there exist, within a population of a quarter of a million people, no less than three kinds of bilingual problems. Each of these has called forth some of the same passions and concerns that such situations arouse elsewhere in the world.

First are the Lapps. They speak dialects of the language used by Lapps in various parts of northern Sweden, Finland, Russia, and

Norway. Lappish is a Finno-Ugric language, related to but mutually incomprehensible with Finnish. The Lapps constitute a very small proportion of the population of Norrbotten, possibly only 1.5 percent or something over 3,000 persons, a third of all the Lapps in Sweden. They are the aboriginal inhabitants, not only of this region, but much of northern Norway and Sweden and all of Finland. They were a nomadic people of hunters and fishermen, who step by step were forced back from the more desirable lands, until they were left with territory that proved to be suitable only for reindeer herding. Even this occupation, traditional since the 16th century, is threatened today, and many Lapps have abandoned their native heath for occupations in urban centers and more southerly climes.

As late as 1913 a nomad school system was devised by Sweden, in which the children were taught Swedish, with Lappish used chiefly for religious training. By now many have drifted off into urban areas and have slowly been climbing the ladder of Swedish life, a few succeeding to the extent of going to a university. The jobs most of them have found, however, have been service positions as kitchen maids, shop assistants, office clerks, nurses, or teachers; as railway workers, unskilled laborers, miners, or builder's workmen.

Fifty or sixty years ago Swedish was represented in the area only by a few civil servants, including clergymen and teachers. But in recent years there has been a large influx of Swedes from other parts of the country. The residents are impressed on every hand by the usefulness of Swedish and the uselessness of their native tongue.

Finns, Swedes, and Dialects

While the Lapps mostly live in the backwoods and mountain areas, the Finns of Norrbotten occupy one large agricultural area, the west bank of the Torne River. When Finland was separated from Sweden in 1809 after the Russian defeat of the Swedish armies, the border was arbitrarily drawn at the Torne River, without regard to the fact that several thousand speakers of Finnish lived on the west bank of the river. Today it is estimated that 40,000 speakers of Finnish live there. But in school they learn only Swedish, a situation that has existed since schools were instituted in the 19th century. Not until 1970 has it once again become possible to study Finnish as a subject in the lower grades. In 1945, 72 percent of the school beginners spoke only Finnish; twenty years later this was reduced to 14 percent. The proportion of bilinguals has grown from 21 percent to 57 percent, while the number of monolingual Swedes has multiplied from 7 percent to 29 percent.

The trend is unmistakable. A study by a Finnish research team found that in spite of the obvious value of knowing both languages, there was marked discrimination against those who did. Only 22 percent of the Finnish-speaking children went on beyond grade school, compared to

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46 percent of those who came from Swedish-speaking homes. The positions of social importance, the decision-making jobs, are nearly all in the hands of Swedish speakers. Bilingual Finnish speakers tend to be limited to agriculture and manual occupations. They feel themselves to be inadequate both in Finnish and Swedish. In other parts of Sweden they claim to have suffered discrimination.

From this account one would judge that at least the Swedes of Norrbotten should be at the top of the heap and happy with their linguistic lot. But in fact the language spoken by the old established Swedish population in the area is a dialect so remote from the standard Swedish which is taught at school that at first blush other Swedes are quite baffled. The indigenous population has for centuries been so isolated from the main body of modern, bourgeois, increasingly urbanized Sweden that they have developed a Swedish dialect that is virtually a language of its own.

The author of a dissertation on the language problem of Swedish school children, Tore Österberg, was himself a teacher in the community for many years. Österberg reports that school beginners brought up to speak the local Swedish dialect are tense and stiff in their self-expression and bring to their work a fear instilled by their parents which makes them conceal their dialect as well as their descent from dialect speakers. Österberg performed the experiment of giving beginners reading materials written in their own dialect alongside materials in Standard Swedish. For four weeks they got intense instruction in the dialect, and for the rest of the year a gradual transition was made to Standard Swedish. He found, at the end of the year, that the experimental group could read better and assimilate more than the control group. He contends that consistent teaching along these lines would reduce the tension in the community between dialect and Standard Swedish and ease the transition from one to the other for those whose lives will be led outside the community.

Using Language for Social Discrimination

Language is not a problem unless it is used as a basis for discrimination, but it has in fact been so used as far back as we have records. The trend in Sweden as in the United States is clearly toward a language shift on the part of the minorities as they are more fully integrated into the national life. But this is a process that promotes cultural dislocation and social rootlessness, that deprives the minorities not only of their group identity, but even of their human dignity. Because their language is not considered valid in the larger society, they are made to feel that they are not personally adequate.

There are several ways one can look at these situations. One can take the cold-blooded, even cynical point of view that such differences in language stand in the way of progress and should be eliminated by a

firm and ruthless policy of assimilation: it impedes the efficiency of the national machine to have a multitude of codes which interfere with one another and slow up the process of organizing the people into a homogeneous work force. At the opposite extreme, one can wish to preserve forever such enclaves in the name of ethnic variety and the sacredness of mother tongues; local and even national romanticism has played on these chords for going on two centuries, with the result that many languages have come into being which might perhaps just as well have died.

Language and Personality

And yet, who are we to call for linguistic genocide in the name of efficiency? Let us recall that although a language is a tool and an instrument of communication, that is not all it is. A language is also a part of one's personality, a form of behavior that has its roots in our earliest experience. Whether it is a so-called rural or ghetto dialect, or a peasant language, or a "primitive" idiom, it fulfills exactly the same needs and performs the same services in the daily lives of its speakers as does the most advanced language of culture. Every language, dialect, patois, or lingo is a structurally complete framework into which can be poured any subtlety of emotion or thought that its users are capable of experiencing. Whatever it lacks at any given time or place in the way of vocabulary and syntax can be supplied in very short order by borrowing and imitation from other languages. Any scorn for the language of others is scorn for those who use it, and as such is a form of social discrimination.

What are the solutions? The economic disadvantages of having more than one language in a country or in the world are so patent as to make an almost irresistible argument for homogenization to be used by administrators who are congenitally and professionally hostile to language minorities. Such people argue for (1) assimilation by force; (2) assimilation by precept; (3) assimilation by teaching. In any case, assimilation. Groups that refuse to assimilate must either be (1) repatriated or (2) segregated. Repatriation can be brutal and may be impossible. Segregation is contrary to the spirit of an open society. Yet it is the policy practiced by most religious communities and the ultimate justification for the existence of nations. Within a nation it is enforced by geographical separation, by economic necessity, by class differences, and by caste distinctions. There are two humanistic solutions which suggest themselves immediately to men of good will: (1) deliberately to inculcate and to promote by means of education a spirit in the general population of interest and understanding of minority peoples, and (2) to make sure that people who speak differently understand and are understood, if necessary by making them bilingual.

In principle this is the policy that Sweden is today trying to implement, at least for the Lapps. In the law that regulates educational policy in this area since 1962 we read:

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As far as the schooling of the Lapps is concerned, they [the Lapps] have the right to an instruction which is in all respects equal, but which does not therefore have to be identical with that which the majority receives. By virtue of being a minority group they have certain peculiar instructional needs which society cannot overlook. They have the right to get in their schools an orientation concerning the development of their own culture and its status in the present, an orientation which does not merely aim to communicate knowledge, but also to awaken respect for and piety towards the heritage from earlier generations as well as a feeling of solidarity with their own people.

The same spirit has led in the United States to the passage of a Massachusetts statute that provides for

...the teaching of academic subjects both in a child's native language and in English; for instruction in reading and writing the native language, and in understanding, speaking, reading, and writing English; and for inclusion of the history and culture associated with a child's native language as an integral part of the program.

The Solution of Bilingualism

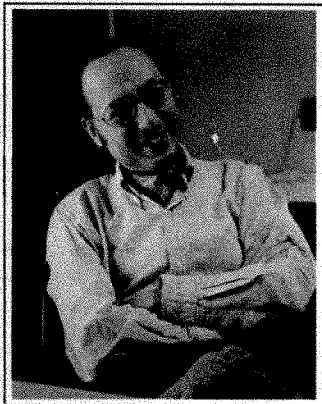
The first step in applying our best scientific knowledge to language problems is to realize that no man's speech is inferior, only different. Like Lappish, American Indian languages have not been used for atomic science, but their subtleties of expression for their aboriginal users are beyond our imagination. Like Finnish in Sweden, Chicano Spanish may be the idiom of a population lost in an alien land, but in its homeland it is a language of the highest literary and scientific cultivation. Just as Norrbotten Swedish sounds strange to Swedes, ghetto or backwoods English sounds quaint or baffling to speakers of Standard English; nevertheless, it follows internal laws of its own that permit its users to express anything they wish to say. Our problem is how to teach tolerance of difference and acceptance of a man for what he is, not for how he talks.

So, by a long and circuitous route, we are led back to bilingualism as the solution to the curse of Babel. Bilinguals are often unpopular, and may be looked on with distrust by monolingual neighbors, who suspect that their loyalties are divided. They are viewed as mentally handicapped by certain misguided psychologists who depend on I.Q. tests to assess human potentialities. Bilinguals do have problems of their own in keeping their languages apart. But in hundreds of situations in our world, bilingualism offers the only humane and ultimately hopeful way to bridge the communication gap and mitigate the curse of Babel.

Modern Music: Two Views

1. A CRITIQUE OF CACOPHONY

By Oscar Mandel



Serious music composed in the 20th century, argues the author, must be pronounced a failure. Because it has turned its back on harmony and tonality, and therefore beauty, it has lost its traditional audience, which overwhelmingly prefers Mozart and Beethoven to Schoenberg and Boulez. Professor Mandel calls on contemporary composers to reexamine their assumptions and chart new directions. His article is excerpted from *The South Atlantic Quarterly*.

Oscar Mandel teaches comparative literature and drama at the California Institute of Technology. His books include *A Definition of Tragedy* and *The Theater of Don Juan*, along with a translation of *Seven Comedies* by Pierre de Marivaux.

Is it still possible, in the declining half of the 20th century, to raise a sensible argument against dissonant music? Or is the question dead? In her recent book, *The New Music*, Joan Peyser praises the “annihilation of tonality” which was carried out in the days of Arnold Schoenberg and Alban Berg; but she frankly admits the contemporary composer, working in this new tradition, “is alienated from his audience.” The publication of her book suggests that the liquidation of *beauty* in music—because beauty is what it is finally all about—still needs defending. If so, all hope is not lost. Those of us who have sometimes felt like pitiable fossils because the experts and the professionals have been treating us like pitiable fossils for 60 or 70 years might try our voices again, take heart, and discover that we are still alive. Let us see therefore whether we can speak to our atonalists so sensibly that they might be willing to reconsider the foundations of their musical lives.

Why Music?

To begin at the beginning, we must come to an understanding about the aim of music. Why does music exist at all in an “advanced civilization”? Leaving aside the practical uses of music—the bugle that wakes soldiers up, the band to which people dance, the organ helping a religious service along—we ask what is the purpose of music for the sake of which people sit down in large rooms and to which they listen for an hour, two hours, or three hours, with evident attention and satisfaction.

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I propose that the aim of music is to "refresh our spirits." I take this modest phrase from the title page of Bach's *Clavier-Übung* (piano study) of 1735. Search as I will among all manner of possibilities, I cannot find another purpose to challenge that of refreshing our spirits. If we still believed in God, we might well make it an axiom that music exists to celebrate His glory. But even then, how would we know whether He felt celebrated or insulted, except by consulting our own delight first?

Not Ideas but Emotions

In the absence of God, what else can reasonably be proposed? That the purpose of music is to create knowledge about the world in the listener's or the composer's mind? I think it would be difficult to make this stick. I do not deny that instrumental music can accomplish *something* in the world of concepts and views of life. Ideas and images (along with feelings) of devotion, misery, enthusiasm, mockery, and the like can be induced by music, but they occur as random bobs on the surface without logical integrations, and they cannot be marshaled into organized insights into the world. Music *reminds* us of ideas, while literature asserts them. When music carries a text, the composer occasionally uses his instruments to throw an idea, as it were, at the text. If a group of twittering flutes is brought in at the moment the text is expressing a "noble" thought, the music is being ironical: it flings a denial at the words. This is undoubtedly a thought. But how far does all this carry us? A few steps, and then we are back with "emotional power." Music creates emotion; and to say emotion (in this case) is to say pleasure.

If, however, I am told that my view is wrong, that atonal music, for example, is a commentary upon modern life, a way of grasping an understanding the quality of modern civilization, then I am forced to remove myself with my own axioms and to leave my dissenter with his. He will tell me, "Of course you reject atonal music; you insist on *enjoying* it, while I am showing you that it must interpret contemporary life for you." Our conversation stumbles on incompatible axioms for which there is no court of appeal.

It stumbles too when the professional musician claims that music exists primarily in order to further music—that music is an exploration of the endless possibilities of producing sounds, and as such is sufficient unto itself. This person considers the end of music achieved if he hears a new electronic sound-producer or if he creates a timbre never before heard by human ears. He might classify one of his products as irritating and another as gentle, but the two are equally successful in his mind. More: he strives as hard to obtain "intolerable" sounds as any other kind. The pleasure he creates in his listeners is defined most properly as a sense of satisfaction in invention: invention of sounds, combination of sounds, and organizing principles for sounds. It is, in short, a professional's pleasure in the tools of his profession.

1. *A Critique of Cacophony*

Two other avenues are open: Morality and Hygiene. Here discourse becomes easier. Music can be thought of as an aid to fervor in battle or success in love; its mission might be to assuage hatred and promote sympathy, to further digestion, or to tranquilize workers in a business office. Its therapeutic usefulness to the nervous may be stressed. But while those who subscribe to any of the moral or hygienic possibilities of music will agree that music "stirs our emotions," for them stirring our emotions is never the end of the road. What is the good, they ask, of having our emotions stirred? Does the stirring make us better men, saner men, healthier men, or happier men? This is the real question.

The answer is yes: perhaps all of these together. And perhaps the expression "refreshing our spirits" amiably includes them all. If so, I would suggest that music cannot make us better, saner, or healthier unless it has first given us pleasure. Neither my digestion nor my humanity will be helped if I am actively hating what I hear.

Music for Whom?

The thorns become sharper as soon as we ask: sensuous delight for whom? Artists are often irrational creatures. We hear them over and over again complaining about the lack of communication in our society; but the next moment they blithely recommend self-expression as the only genuine purpose of art. "I write to please myself." "I paint what I need to paint."

Composers are not behindhand with these claims. "I do but sing because I must" is a favorite among them. And, like artists everywhere today, they leap easily from the idea that artistic creation arises from an inner need to express oneself to the notion that once the self has been expressed, the work of art is a success. This is in its way a fine notion. It admits no rebuttal. If the primary aim of a musical composition is to give satisfaction to its composer, all is well: thousands upon thousands of musical scores succeed every year; the world is rolling in masterpieces.

Leaving the school of self-expression, I turn to those who affirm as an axiomatic point that a piece of music must please "the public." But what public is "the public"? Let me cautiously accept the traditional distinction among three possible audiences: (1) an audience of specialists (composers, performers, teachers, students, scholars, critics, and a few highly trained amateurs), (2) a general educated audience with a taste for the arts, and (3) the mass uneducated public whose aesthetic needs are satisfied by the latest popular mode.

I cannot think of another period in history in which the primary aim of music—the music composed by nearly all the serious artists of a given time—was to please the musical group itself. Is this aim satisfactory? To whom? And why? Those of us who feel that dissonant music is an aberration must fall back on another axiom. This axiom is that the primary aim of music is to delight a large audience of non-specialists. Or,

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turning my axiom around, I could say that a great number of people who are not themselves musicians or critics *need* the pleasure of music, and *search* for it.

At this stage I dismiss the third audience I have mentioned: the mass audience. This audience is well served by contemporary music. It has the sweet violin music it needs for candlelight situations, it has trombone bands to dance by, it has crooners delivering simple love songs, it has the frenzies of acid rock for its orgiastic needs—in short, there is a vast supply of 20th-century sound to delight the mass 20th-century ear. One music in our time has satisfied the specialist, and another has satisfied the uneducated. There remains, in the vast middle, that class to which millions of us belong: the educated non-specialists, to whom, *for sixty years*, fresh music has been denied.

I launch the exaggeration and then retreat from it—in order to recapture my ground and hold it. Stravinsky is practically a popular composer—through half a dozen of his works. Benjamin Britten, another moderate, has created intense beauty without lapsing into Victorian romanticism. Certain highly expressive works, like Bartok's quartets, which still play off discord against concord, attract the sophisticated wing of my second public. But when all the qualifying is done, the large truths stand unaltered: thoroughgoing dissonance dominates the field of "serious" music; all other styles are on the defensive.

Winning an Audience

The partisans of dissonant music claim that people in the future will love cacophony. "In a few decades," Schoenberg wrote a few decades ago, "audiences will recognize the *tonality* of this music today called atonal.... Atonal is what will be understood in the future." For Mrs. Peyser, this stale prophecy still has charm. "In time," she writes, "the strangeness will fade and men will embrace the great works that will appear." But in what time, may we ask?

Beethoven was a revolutionary composer; Wagner was a revolutionary composer; Debussy was a revolutionary composer. But did it take these men 60 years to persuade the educated thousands or millions? By no means. In their much slower times, they converted their thousands and millions in a decade or less. Dissonant composers clearly staged a revolution of different order. They demolished the socio-aesthetic foundations of art. And after 60 years we can declare the experiment of dissonance bankrupt.

This bankruptcy is clearest in the realm of vocal music. Since Puccini died in 1924, not a single opera has imposed itself as a permanent and reliable piece in the world's repertory. In agony are the mass, the oratorio, and the serious song. Instrumental music may hobble forward on its crutches without beauty, but the human voice clambering cheerlessly from sound to sound, forbidden on pain of death by ridicule to utter a

1. *A Critique of Cacophony*

melody, has absolutely nowhere to go. It seems never to occur to our experts and professionals that history offers no precedent for an entire epoch unable or unwilling to furnish singable music to the educated public.

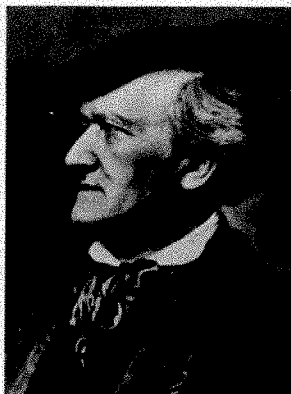
Why has music failed? Why have three generations of music lovers been compelled to turn for nearly all their musical experience to works of the past? It is not enough to accuse modern composers of having deliberately declared war on humanity—of having invented poisonous sound combinations and sound sequences for the express purpose of pestering society. To be sure, in part they joined with other artists in the ever-enjoyable game of baiting-the-philistine. But mostly they stumbled into a war by accident.

The Ear's Vulnerability

One explanation for this accident is to be found in the unequal vulnerability of our sight and hearing. We are more easily offended and hurt by a strident radio commercial than by a stupid advertising display in a newspaper. "At least the picture doesn't make noise!" Our hearing is more readily irritated than our sight. Because the area of tolerable sound experiences is relatively small, experiments in music reached and then crossed the boundary far more rapidly than parallel experiments in the visual arts.

I do not doubt that training or exposure can affect the extent and the precise contour of these areas of tolerance. But can they be stretched indefinitely? Partisans of dissonant music like Mrs. Peyser believe that time, training, and exposure will colonize new ground. A new generation will respond to Stockhausen and Boulez as we, laggards, adore Bach. However, two new generations have refused to budge, and Webern is still performed—60 years later!—as "avant-garde music." I submit that our composers strayed into an area of aesthetic intolerance that will never be colonized—either because this music inflicts physiological

Beethoven, Wagner, Debussy: revolutionary composers who won a mass public



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lesions on the human brain, or because it is kept at bay by the unavoidable presence and damaging otherness of traditional "beautiful sounds."

Those who like to speak of "the wonderful capacity of the human ear to adapt to new conditions"—I am quoting Professor Joseph Machlis—overestimate this capacity. The areas of tolerance do expand, contract, or simply alter in individuals and societies; and it is true that sounds which scraped at our nerves at one time may appear beautiful a year or a decade later. But to turn this limited flexibility and adaptability into a principle of infinite plasticity is mere recklessness.

How then is it that the first audience I have described—the audience of disciples and specialists—does exist, and does renew itself year after year? Are we dealing with special beings endowed by heredity with areas of tolerance distinct from our own? And if not, why can we not join this audience where it lives?

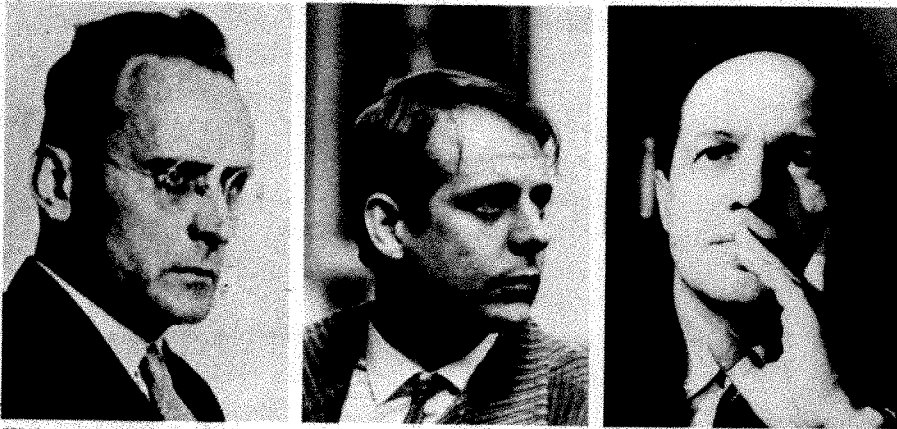
In the first place, we must keep in mind that an 'mpassable gulf exists between this first audience and ourselves with regard to the aim of music itself. Much of this audience has lost interest in sensuous delight, in "refreshing the spirit," in beauty. Much of this audience, as I have noted earlier, is interested chiefly in refining the tools of the musical profession.

To those in this group who claim that only extremes of training and discipline can reveal the beauty of dissonance and its ability to "refresh our spirits," I reply that life is short, we can all be trained in but a few disciplines, and the artist, like the engineer or the doctor, must take us as we are. Anyone who writes music that can be considered beautiful only by an audience which has, in effect, duplicated the composer's training, condemns himself to solitude. Less than anyone else can he hope that dissonant music will some day seem beautiful to the general intelligentsia.

Attacking the Cult of Beauty

The line of reasoning that tries to integrate dissonant music, now or in the future, for the untrained or the trained, into a system of "beautiful sounds" is better abandoned altogether. Theory is on much firmer ground if it proposes instead that music joined the other arts at the beginning of this century in a vast and exhaustive exploitation of ugliness (in the sensuous arts) and evil (in literature). This is the mainstream of 20th-century art as a whole. By this double exploitation more than anything else it is marked off from the art that preceded it. As late as the 1890's, when the art-for-art's-sake movement was breaking with so much of the past and announcing so much of the future, the cult of beauty was still intact. A first liberation from bourgeois morality had yet to be followed by a second liberation from the cult of beauty. All the arts joined hands to carry out this revolution.

1. A Critique of Cacophony



Webern, Stockhausen, Boulez: *dissonant composers without a sizable audience*

It so happens that music could not afford to make this revolution succeed. For literature and representational art, the exploitation of ugliness and evil left intact their moral, psychological, and philosophical interests—interests upon which writers and representational artists draw heavily for the aesthetic pleasure they create in their audience. But music, we have seen, is not Interpretation of Life. Music does not know the world, it surpasses the world. A string quartet does not tell us whether God is alive or dead, or what to do about the generation gap. For music, giving up beauty meant rashly stripping itself naked. It had nothing else to fall back on.

At this point the arguments I have offered combine. As we glance at contemporary paintings and sculpture, whether abstract or figurative, we discover that the dismissal of Renaissance standards of beauty did not lead instantly to ugliness. It turned out, instead, that the entire tradition of Western art, long and glorious though it was, had failed to occupy all the areas of possible beauty. The beauty of streamlining—to take one example—had yet to be exploited when the 20th century opened. It became clear that the area of *visual* tolerance was far larger than expected. Virgin land was available—room for exploration in effects of beauty.

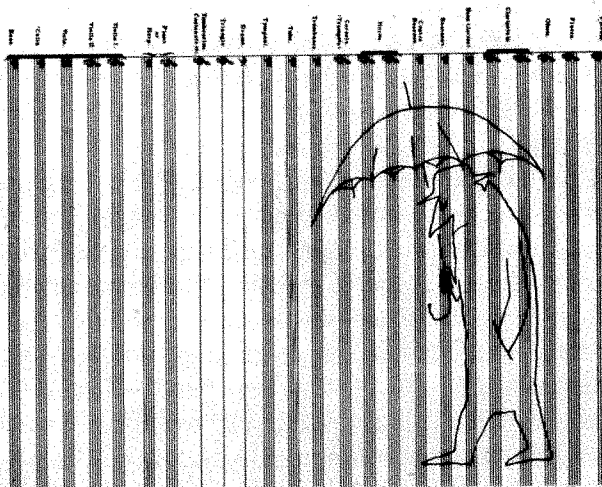
This room for exploration did not exist for music because here the area of tolerance was and is much smaller. Music fell out of traditional areas of beauty and has since lost its audience. Let us apply the same yardstick of popular acceptance I proposed for music to the visual arts. In the visual arts, the time lag was normal. Non-representational art, cubism, surrealism—all produced shock and outrage, but then were promptly integrated into the general sensibility. Modern visualization is everywhere: in advertising; in the decoration of churches, banks, offices and restaurants; in the design of airplanes, coffeepots and chairs. Visual art flows gracefully and normally from sophisticated specialist to naive layman. Modern dissonant music is the only bankrupt art.

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Needed: A New Avant-garde

Every scientist knows that a hypothesis which refuses to work to be replaced by another one. The hypothesis of dissonance—to call it that—has refused to work for 60 years. It has refused (that is, for composers who have wanted to be, like Mozart and Beethoven, members of the general elite. If they are rational beings, they make fresh choices when old ones prove fruitless, they must not go out in new directions. For let me assert as strongly as possible: I believe in change and in experiment, and that an arrest at the point reached by Brahms or Debussy or anyone else would simply have been another kind of death for music. But this does not mean that it is good because it is invention, or that experiment is successful because it is experiment.

For us, the large audience of men and women who are not cretins, a few contemporary works remain to be cherished. But the music of the past that keeps spirits refreshed. Yet every age but ours seems to have been cozy with its own music. Nineteenth-century lovers felt little need to hear 18th-century scores; 18th-century lovers lived peacefully with a minimum of Renaissance music on down to the remotest past. Any generation of the past could have survived exclusively on its own music. Only for us is the past a part of the present. Perhaps our 20th-century cacophonists could “realize musical structures” in their laboratories because they have no old masters to cover for them. They could say, “Beauty? That was the care of long ago. Listen to Vivaldi. We have moved on to something else. But there is nothing else.



Drawing by Saul Steinberg. Reprinted from THE ART OF LIVING by Saul Steinberg, by permission of Harper & Row, Inc. 1945, 1946, 1947, 1948, 1949, by Saul Steinberg.

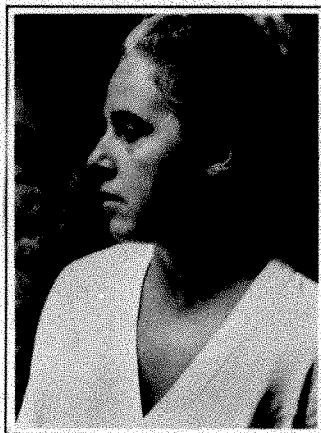
Modern Music: Two Views

2. BEYOND TONALITY

By Joan Peyser

In her book, *The New Music: The Sense Behind the Sound*, the author sympathetically traces "the annihilation of tonality" in 20th-century music—principally in the works of Arnold Schoenberg, Igor Stravinsky, and Edgard Varèse. The following article is adapted from the prologue of her book, published by Delacorte Press.

Joan Peyser is a pianist and music critic, with a degree in musicology from Columbia University. Her writings on music have appeared in many journals and regularly in *The New York Sunday Times*.



The story of 20th-century music is in great part the story of how different composers coped with the annihilation of tonality, that particular system of organizing tones that was assumed after several centuries to be the natural law in music.

Tonality, as it evolved in the 17th century, is a system of seven-note scales in which one note is the focal point or tonic key. The function of each of the other notes in this scale is determined by its relationship to that key. This dynamic hierarchy dominated all Western music in the 18th and 19th centuries.

Yet even at its most pervasive and unassailable, the system contained the seeds of its own decay. Between the notes of the seven-note scale there are, of course, half or chromatic notes. At first these chromatic tones served the auxiliary function for which they were named; they added "color" to a musical work. But as time passed, chromatic notes assumed more significance. In his *Dissonance Quartet*, Mozart bypassed

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certain rules of tonal logic and thus elevated "disagreeable" sounds at the expense of agreeable ones. Several decades later, Beethoven almost burst the tonal seams. But as chromatic as his writing became, all the parts were still resolved in a smooth, orthodox way. Tonality remained a guiding principle.

The trend toward atonality—music without this tonal center or key—accelerated in the late 19th century. Debussy turned his back on the seven-note scale with its five whole tones and two half-tones in favor of a five-note scale of whole tones. Wagner developed a form of modulation—changing key within a work that went far beyond even the unconventional relationships of the late Beethoven works and made for a pervasive tonal restlessness. His perpetual shifting of key centers undermined tonality. Wagner's intellectual protagonist, Hans Sachs, sings of the situation in *Die Meistersinger*:

Your closing key is not the same,
This gives the Masters pain;
But Hans Sachs draws a rule from this:
In Spring, it must be so! 'Tis plain!

Arnold Schoenberg quotes these very lines in an essay and adds his own ethical interpretation: "In Spring! In the development of art it must always be as it is in Spring!"

Schoenberg's 12 Tones

Schoenberg's first keyless movement ushered in the atonal period in Vienna in 1908. After writing several extraordinary, expressionist atonal works between 1908 and 1912, Schoenberg sought a set of musical commandments which would lead his people out of the chaos of atonality. When he was 49 years old, in 1923, Schoenberg revealed this new law, referring to it as "the method of composing with twelve tones," now commonly known as the "12-tone technique" or "dodecaphony." Repudiating the omnipotence of the tonic, he asserted the equal importance of all twelve notes of the chromatic scale. The composer arranged the twelve notes in a particular order, the "tone row." It was this row or "series" of pitches—whether in its original position, inverted, reversed or with its inversion reversed—that determined the structure of the entire work. Schoenberg compared the row to a hat, identifiable as the hat independent of the angle from which it was viewed. Thus the composer attempted to formulate a 12-tone, melodic technique which would supply the unity formerly provided by the tonal, harmonic one.

The 12-tone technique put an end to a several-hundred-year period in which music was devoted to a dramatic-expressive ideal. The technique, as extended by Schoenberg's musical descendants of the 1950's and 1960's, developed into an abstract language devoid of extramusical

2. Beyond Tonality

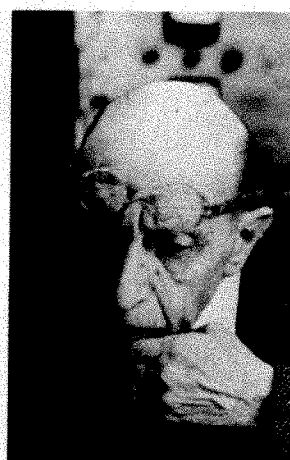
implications. Music was not alone, among the arts, in developing along a more abstract path. It was a logical counterpart of that movement in the development of art in which its function, as Arnold Hauser has stated, "of being true to life and faithful to nature has been questioned for the first time since the Middle Ages." Although some of the developments of dodecaphony provide a kind of music appropriate for a scientific, technologic age, the roots of that system lay in one man's way of viewing the world and his compelling manner of systematizing that view.

Schoenberg attracted a corps of disciples in Vienna and Berlin. Webern, his most famous pupil, went further than his teacher and extended the serial principle beyond just pitch to that of the duration of individual notes. Inspired by Webern, members of the next generation adopted the serial idea, applying it to still other attributes of the musical tone—like dynamics, timbre, attack and decay. Many post-Webern serialists have since moved away from this tight application of the serial idea. Pursuing an ideal which depends upon the absence of any focus at all, they strive, paradoxically, for a sense of discontinuity and unpredictability around a unifying principle.

Stravinsky and Neoclassicism

Schoenberg's revolution of 1923 not only was difficult for many listeners to accept but impossible for many composers to adopt. Musicians—especially those outside Austria and Germany—resented the imposition of a new set of rules far more stringent than any imposed by tonality. Those opposed to dodecaphony, including such disparate composers as Stravinsky, Hindemith, Bartók, Milhaud and most Americans in the 1930's and 1940's, found themselves thrust together under the large amorphous umbrella labeled "neoclassicism."

Schoenberg, Varèse, Stravinsky : they "coped with the annihilation of tonality."



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In its broadest meaning, neoclassicism implied a rejection of the 12-tone technique and a revival of interest in 19th-century forms. This led not only to the use of such traditional forms as the concerto, opera buffa and oratorio but also to a reexploration of tonality. Stravinsky composed with tonal centers without reverting to the sonata form, that particular formal structure that was an organic outgrowth of harmonic tonality. Stravinsky often balanced two key centers at once, and Milhaud went further in this direction; the French composer promulgated "polytonality," balancing four or five different tonalities at the same time.

Each of the two major schools in the first half of the 20th century—dodecaphony and neoclassicism—was presided over by a God-like figure: Schoenberg over the 12-tone school and Stravinsky over the neoclassicists. Both created a formidable kind of idolatry; neither questioned the correctness of his way.

Varèse and Electronic Music

Edgard Varèse, the pioneer of electronic music, by contrast enjoyed no comparable following. His case is a lonely one. In 1965, after he died, Pierre Boulez wrote in the *Domaine Musical* that he loved Varèse because he was "marginal" and "*solitaire*," possessing the "*rareté d'un diamant unique*." Varèse did not interest himself in dodecaphony and despised the apparent retrogression of neoclassicism. He dismissed polytonality as the "simultaneous sounding of parts each of which is inane, one of which has been transposed into another key to help disguise the lack of substance. We get the impression, usually, of a dirty chord in C Major."

Producing increasingly vertically dense scores, Varèse created a nonmelodic fabric that depended on rhythm and sonority. Until after World War II he had neither the technology nor the audience he so desperately needed. But today his work has been vindicated: electronic media and pitchless sounds produced by conventional instruments are integral aspects of the new music.

A New Musical Language

From the 16th through the 19th centuries, artists focused their attention on man. Perspective in painting and tonality in music reflected the shift away from God's universe to the physical reality of the world. Tonality, with its built-in contrasts, was the perfect medium to express human passion.

But in recent years many artists have turned away from man toward a more medieval-like search for that which lies behind man. The new, allusive total theater eschews an enclosed form with a beginning, middle, and end in favor of an unstructured openness. Composers drawn to this idea are groping toward something new, toward a symbol that

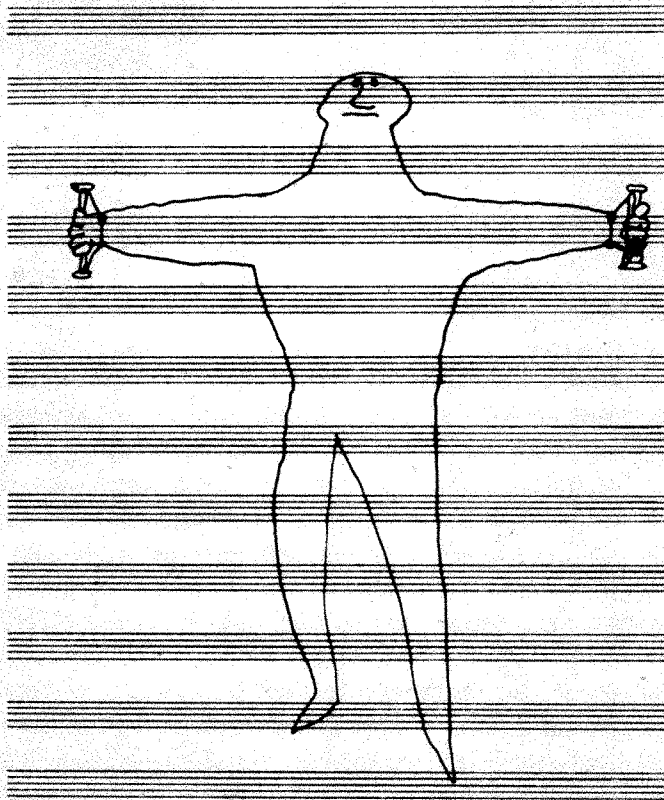
2. Beyond Tonality

cannot be paraphrased or fixed in a theoretical system. This new symbol must be approached directly, in some intuitive way.

One can only dimly perceive the essence of the art of one's own time. But this much is certain: serialism, chance, and the total theater all share one denominator—they reject rhetoric and expressionism. They may also be steps in a long journey towards the crystallization of a musical language that will serve as tonality did in its own time. Max Planck, the great physicist, has described the contemporary condition of science in an essay he entitled "Where is Science Going?" He might just as well have been writing of music since Schoenberg's *Pierrot Lunaire* and Stravinsky's *The Rite of Spring*:

We are in a position similar to that of a mountaineer who is wandering over uncharted spaces, and never knows whether behind the peak which he sees in front of him and which he tries to scale there may not be another peak still behind and higher up....

The value is not in the journey's end but in the journey itself.



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MANAGING COMPLEX ORGANIZATIONS

By Peter F. Drucker

Management is not yet a science, writes the author, but the experience of the past 20 years suggests a number of guidelines that are at least more useful than some of the traditional doctrines in the field. Most important, he argues, is to create structures that liberate human energies to perform the tasks required by the organization. His article is excerpted from the *Harvard Business Review*, which adapted several chapters of Professor Drucker's new book, *Management: Tasks, Responsibilities, Practices*, published by Harper & Row.

Peter F. Drucker is professor of social science at Claremont Graduate School in California and a leading management consultant for business and government in the United States and abroad. His books include *Managing for Results*, *The Age of Discontinuity*, and *Men, Ideas and Politics*.



Organization structures are becoming increasingly short-lived and unstable.

The "classical" organization structures of the 1920's and 1930's, which still serve as textbook examples, stood for decades without needing more than an occasional touching up. American Telephone & Telegraph, General Motors, DuPont, Unilever, and Sears, Roebuck maintained their organizational concepts, structures, and basic components through several management generations and major changes in the size and scope of the business. Today, however, a company no sooner finishes a major job of reorganizing itself than it starts all over again.

General Electric, for instance, finished a tremendous organization overhaul around 1960, after almost a decade of hard work; since then it has revamped both its structure and its overall strategies at least twice. Similarly, Imperial Chemicals in Great Britain is restructuring an organization design that is barely 10 years old. And the same restless-

ness and instability afflict organization structures and concepts in the large U.S. commercial banks, in IBM, and in U.S. government agencies. For instance, the Health, Education and Welfare Department has been subjected to a "final" reorganization almost every year in its 20-year history.

To some extent this instability is a result of gross overorganizing. Companies are resorting to reorganization as a kind of miracle drug in lieu of diagnosing their ailments. Every business observer can see dozens of cases where substantial, even massive, organization surgery is being misapplied to take care of a fairly minor procedural problem, or—even more often—to avoid facing up to personnel decisions. The wrong structure is indeed a guarantee of nonperformance; it produces friction and frustration, puts the spotlight on the wrong issues, and makes mountains out of trivia. But "perfect organization" is like "perfect health": the test is the ills it does not have and therefore does not have to cure.

Even if unnecessary organization surgery were not as rampant in our institutions as unnecessary appendectomies, hysterectomies, and tonsillectomies are said to be in our hospitals, there would still be an organization crisis. Twenty years ago many managers had yet to learn that organization design and organization structure deserve attention, thinking, and hard work. Almost everyone accepts this today; indeed, organization studies have been one of the true "growth industries" of the past 20 years. But while a few years ago organization theory had "the answers," today all is confusion.

The crisis is simultaneously a crisis of organization theory and of organization practice. Ironically, what is happening is not at all what organization theorists like Chris Argyris, Warren Bennis, Douglas McGregor (and I myself) have been predicting for at least 10 years: pressures for a more free-form and humanistic organization that provides greater scope for personal fulfillment play almost no part in the present organization crisis. Instead the main causes of instability are *changes in the objective task*, in the kind of business and institution to be organized. This is at the root of the crisis of organization practice.

Early Models of Functional Structures

In what follows I compare old models with new realities and describe some new design principles. These principles can be matched to the tasks of modern management as well as to the formal needs of all organizations, independent of their purpose. In exploring these relationships, we can discern a way to avoid the organization crisis that affects so many businesses and institutions.

Twice in the short history of management we have had the "final answer" to organization problems.

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The first time was around 1910 when Henri Fayol, the French industrialist, thought through what were, to him, the universally valid functions of a manufacturing company. (I am using the word "function" in the common, management sense, not in the way Fayol used it to describe administrative concerns.) Of course, at that time the manufacturing business presented the one truly important organization problem.

Then in the early 1920's Alfred P. Sloan, Jr., in organizing General Motors (GM), took the next step. He found "the answer" for organizing a large, multidivisional manufacturing company. The Sloan approach built the individual divisions on the functional structure that Fayol had specified for a manufacturing business, that is, on engineering, manufacturing, selling, and so on. But it went beyond Fayol by organizing the business itself on the concept of "federal decentralization," that is, on the basis of decentralized authority but centralized control. By the mid-1940's GM's structure had become the model for larger organizations around the world.

Where they fit the realities that confront organization designers and implementers today, the Fayol and Sloan models are still unsurpassed. Fayol's functional organization is still the best way to structure a small business, especially a small manufacturing business. Sloan's federal decentralization is still the best structure for the big, single-product, single-market company like GM.

Conflict with Present Realities

But more and more of the institutional reality that has to be structured and organized does not "fit." Indeed the very assumptions that underlay Sloan's work—and that of Fayol—are not applicable to today's organization challenges. For example, there are at least six ways in which the GM structure no longer serves as a model for present organization needs.

1. General Motors is a manufacturing business. Today we face the challenge of organizing the large *non*manufacturing institution. There are not only the large financial businesses and the large retailers, but also, equally, there are worldwide transportation, communications, and customer service companies. The latter, while they may manufacture a product, put their greatest emphasis on outside services, as most computer businesses do. Then there are, of course, all the nonbusiness service institutions, e.g., hospitals, universities, and government agencies. These "*non*manufacturing" institutions are, increasingly, the true center of gravity of any developed economy. They employ the most people, and they both contribute to and take the largest share of the gross national product. They present the fundamental organization problems today.

Managing Complex Organizations

2. General Motors is essentially a single-product, single-technology, single-market business. Even accounting for the revenues of its large financial and insurance subsidiaries and of its home appliance and locomotive products, four-fifths of its total revenue are still produced by the automobile. The cars that General Motors produces differ in details, such as size, horsepower, and price, but they are essentially one and the same product. A manager who had all his experience in, say, the Pontiac Division, will hardly find Chevrolet totally alien—and even Opel in Germany will not hold a great many surprises for him.

By contrast, the typical businesses of today are multiproduct, multi-technology, and multimarket. They may not be conglomerates, but they are diversified. And their central problem is a problem General Motors did not have: the organization of complexity and diversity.

There is, moreover, an even more difficult situation to which the GM pattern cannot be applied: the large single-product, single-technology business that, unlike GM, cannot be subdivided into distinct and yet comparable parts. Typical are the “materials” businesses such as steel and aluminum companies. Here belong, also, the larger transportation businesses, such as railroads, airlines, and the large commercial banks. These businesses are too big for a functional structure; it ceases to be a skeleton and becomes a straitjacket. They are also incapable of being genuinely decentralized; no one part on its own is a genuine “business.” Yet as we are shifting from mechanical to process technologies, and from making goods to producing knowledge and services, these large, complex, but integrated businesses are becoming more important than the multidivisional businesses of the 1920’s and 1930’s.

Focus on the International Market

3. General Motors still sees its international operations as organizationally separate and outside. For 50 years it has been manufacturing and selling overseas, and something like one-quarter of its sales are now outside North America. But in its organization structure, in its reporting relationships, and above all in its career ladders, GM is a U.S. company with foreign subsidiaries. Rather than leaning toward an international, let alone a multinational operation, GM’s top management is primarily concerned with the U.S. market, the U.S. economy, the U.S. labor movement, the U.S. government, and so on. This traditional structure and viewpoint of GM’s top management may, in large part, explain the substantial failure of GM to take advantage of the rapid expansion and growth of such major non-U.S. automobile markets as Europe, where GM’s share has actually been dropping, or Brazil, where GM failed to anticipate a rapidly emerging automobile market.

In contrast, during the last 20 years many other companies have become multinational. For these companies, a great many cultures,

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countries, markets, and governments are of equal, or at least of major, importance.

4. Because GM is a one-product, one-market, one-country company, information handling is not a major organization problem and thus not a major concern. At GM everyone speaks the same language, whether by that we mean the language of the automotive industry or American English. Everyone fully understands what the other one is doing or should be doing, if only because, in all likelihood, he has done a similar job himself. GM can, therefore, be organized according to the logic of the marketplace, and the logic of authority and decision. It need not, in its organization, concern itself a great deal with the logic and flow of information.

By contrast, multiproduct, multitechnology, and multinational companies have to design their organization structure to handle a large flow of information. At the very least they have to make sure that their organization structure does not violate the logic of information.

5. Four out of every five GM employees are either manual production workers or clerks on routine tasks. In other words, GM employs yesterday's rather than today's labor force.

But the basic organization problem today concerns knowledge work and knowledge workers. They are the fastest growing element in every business; in service institutions, they are the core employees.

6. Finally, General Motors has been a "managerial" rather than an "entrepreneurial" business. The strength of the Sloan approach lay in its ability to manage, and manage superbly, what was already there.

New Design Principles

Today's organizer is challenged by an increasing demand to organize entrepreneurship and innovation. But for this undertaking, too, the General Motors model offers no guidance.

We do not know how to handle these new organization realities or how to satisfy their structural demands. Nevertheless, the organizing task has not waited. To tackle the new realities, we have in the past 20 years improvised ad hoc design solutions to supplement the Fayol and Sloan models. As a result, the organization architect now has available five so-called design principles, i.e., five distinct organization structures. The two traditional ones already mentioned have been known as principles of organization design for many years:

- Henri Fayol's functional structure.
- Alfred P. Sloan's federal decentralization.

Three are new; indeed they are so new that they are not generally known, let alone recognized, as design principles:

- Team organization.
- Simulated decentralization.
- Systems structure.

In *team organization*, a group—usually a fairly small one—is set up for a specific task rather than for a specific skill or a specific stage in the work process. In the past 20 years we have learned that whereas team design was traditionally considered applicable only to short-lived, transitory, exceptional task-force assignments, it is equally applicable to some permanent needs, especially to the top-management and innovating tasks.

In an organization that is both too big to remain functionally organized and too integrated to be genuinely decentralized, *simulated decentralization* is often the organization answer. It sets up one function, or one stage in the process, or one segment, as if it were a distinct business with genuine profit and loss responsibility. It treats accounting fictions, transfer prices, and overhead allocations as if they were realities of the marketplace. For all its difficulties and frictions, simulated decentralization is probably the fastest growing organization design around these days. It is the only one that fits, albeit poorly, the materials, computer, chemical, and pharmaceutical companies, as well as the big banks; it is also the only design principle suited for the large university, hospital, or government agency.

Finally, in *systems structure*, team organization and simulated decentralization are combined. The prototype for this design principle was the National Aeronautics and Space Administration's (NASA's) moon exploration program, in which a large number of autonomous units—large government bodies, individual research scientists, profit-seeking businesses, and large universities—worked together, joined by the needs of the situation rather than by logic, and held together by a common goal and a joint top management. The large transnational or multinational company, which is a mix of many cultures, governments, businesses, and markets, is the present embodiment of an organization based on the systems concept.

Major Tasks of Management

None of the new design principles is easy or trouble-free. Compared to the traditional designs of functionalism and federal decentralization, they are indeed so difficult, complex, and vulnerable that many organization theorists maintain that they are not principles at all, but abominations. And there is no question that wherever the traditional principles can be used, they should be; they are infinitely easier. The traditional principles are, however, far more limited in their scope than the new ones, and when misapplied they can cause even greater problems.

A somewhat different way of viewing organizational relationships is to identify the principal tasks of management. We have learned that, in a very general analysis, organization design should simultaneously structure and integrate three different kinds of work: (1) the operating task, which is responsible for producing the results of today's business;

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(2) the innovative task, which creates the company's tomorrow; and (3) the top-management task, which directs, gives vision, and sets the course for the business of both today and tomorrow. No one organization design is adequate to all three kinds of work; every business will need to use several design principles side-by-side.

In addition, each organization structure has certain formal specifications that have nothing to do with the purpose of the structure but are integral parts of the structure itself. Just as a human body can be described as having certain characteristics, regardless of the occupation of its inhabitant, so can an organization structure. Bodies have arms and legs, hands and feet, all related to each other. Similarly, organizations are structured to satisfy the need for:

- *Clarity*, as opposed to simplicity. The Gothic cathedral is not a simple design, but your position inside it is clear; you know where to stand and where to go. A modern office building is exceedingly simple in design, but it is very easy to get lost in one; it is not clear.
- *Economy* of effort to maintain control and minimize friction.
- *Direction of vision* toward the product rather than the process, the result rather than the effort.
- *Understanding* by each individual of his own task as well as that of the organization as a whole.
- *Decision-making* that focuses on the right issues, is action-oriented, and is carried out at the lowest possible level of management.
- *Stability*, as opposed to rigidity, to survive turmoil, and *adaptability* to learn from it.
- *Perpetuation and self-renewal*, which require that an organization be able to produce tomorrow's leaders from within, helping each person develop continuously; the structure must also be open to new ideas.

A Dynamic Balance

Even though every institution, and especially every business, is structured in some way around all these dimensions of management, no one design principle is adequate to all their demands and needs. Nor does any one of the available design principles adequately satisfy all of the formal specifications. The functional principle, for instance, has great clarity and high economy, and it makes it easy to understand one's own task. But even in the small business it tends to direct vision away from results and toward efforts, to obscure the organization's goals, and to encourage compromised decisions. It has high stability but little adaptability. It perpetuates and develops the technical and functional skills of middle managers, but it resists new ideas and inhibits top-management development and vision. And every one of the other four principles is similarly both a "good fit" against some formal organization specifications and a "misfit" against others.

Managing Complex Organizations

One conclusion from this discussion is that organization structures can either be pure or effective, but they are unlikely to be both. Indeed, even the purest structure we know of, Alfred Sloan's GM, was actually mixed. It was not composed just of decentralized divisions, with functional organization within the divisions. It also contained, from the beginning, some sizable simulated decentralization. For instance, the Fisher Body division had responsibility for all body work but not for any final product. And top management was clearly structured as a team, or rather as a number of interlocking teams.

This does not mean that an organization structure must by necessity be unwieldy or a confused mixture. The tremendous vitality of some older structures—Sears, Roebuck and GM, for instance—shows that a dynamic balance can be achieved. One implication is clear, however, and that is that pure structure is likely to end up badly botched. (This tendency may explain the difficulties that both General Electric and Imperial Chemicals—each trying for pure decentralization—have been experiencing.) Above all, our observations lead us to conclude that organization design is a series of risk-taking decisions rather than a search for the “one best way.” And by and large, organization theorists and practitioners have yet to learn this.

Building the New Structure

There are a number of important lessons to be learned from the experiences of the past 20 years. Some concern new ideas or conclusions we have not recognized before, while others involve rethinking old concepts and relationships that we thought were settled years ago.

The first thing we can conclude is that Fayol and Sloan were right: good organization structures will not just evolve. The only things that evolve by themselves in an organization are disorder, friction, and malperformance. Nor is the right structure—or even the livable one—intuitive, any more than Greek temples or Gothic cathedrals were. Traditions may indicate where the problems and malfunctions are, but they are of little help in finding solutions. Organization design and structure require thinking, analysis, and a systematic approach.

Second, we have learned that designing an organization structure is not the first step, but the last. The first step is to identify and organize the building blocks of organization, that is, the key tasks that have to be encompassed in the final structure and that, in turn, carry the structural load of the final edifice. This is, of course, what Fayol did with his functions of a manufacturing company, when he designed them according to the work to be done.

We now know that building blocks are determined by the kind of contribution they make. And we know that the traditional classification of the contributions, e.g., the staff-and-line concept of conventional

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U.S. organization theory, is more of a hindrance to understanding than a help. Designing the building blocks or tasks is, so to speak, the "engineering phase" of organization design. It provides the basic materials. And like all materials, these building blocks have their specific characteristics. They belong in different places and fit together in different ways.

We have also learned that "structure follows strategy." Organization is not mechanical. It is not done by assembly, nor can it be prefabricated. Organization is organic and unique to each individual business or institution. We realize now that structure is a means for attaining the objectives and goals of an institution. And if a structure is to be effective and sound, we must start with objectives and strategy.

This is perhaps the most fruitful new insight we have in the field of organization. It may sound obvious, and it is. But some of the worst mistakes in organization building have been made by imposing on a living business a mechanistic model of an ideal organization.

Strategy—that is, the answer to the question: "What is our business? What should it be? What will it be?"—determines the purpose of structure. It thereby determines the key tasks or activities in a given business or service institution. Effective structure is the design that makes these key activities function and produce results.

Some of the new insights into organization design require us to unlearn old ideas. A few of the noisiest and most time-consuming battles in organization theory and practice are pure sham. They pose an either/or dichotomy when the correst answer is "both—in varying proportions."

The first of these sham battles that had better be forgotten is between task-focus and person-focus in job design and organization structure. Structure and job design have to be task-focused. But assignments have to fit both the person and the needs of the situation. There is no point in confusing the two, as the old and tiresome discussion of the non-problem insists on doing. Work is always objective and impersonal; the job itself is always done by a person.

Hierarchy vs. Free Form

Somewhat connected with this old controversy is the discussion of hierarchical versus free-form organization. Traditional organization theory knows only one kind of structure, applicable alike to building blocks and whole buildings. It is the so-called scalar organization, that is, the hierarchical pyramid of superior and subordinates.

Today another—equally doctrinaire—organization theory is becoming fashionable. It maintains that shape and structure are what we want them to be—they are, or should be, free-form. Everything—shape, size, and apparently tasks—derives from interpersonal relations.

Indeed, it is argued, the purpose of the structure is to make it possible for each person "to do his thing."

It is simply not true, however, that one of these forms represents total regimentation and the other total freedom. The amount of discipline required in both is the same; they only distribute it differently.

Hierarchy does not, as the critics allege, make the person at the top of the pyramid more powerful. On the contrary, the first effect of hierarchical organization is to protect the subordinate against arbitrary authority from above. A hierarchical organization does this by defining a sphere within which the subordinate has authority, a sphere within which the superior cannot interfere. It protects the subordinate by making it possible for him to say, "This is *my* assigned job." Protection of the subordinate also underlies the insistence that a man have only one superior. Otherwise, the subordinate is likely to find himself caught between conflicting demands, commands, interests, and loyalties. There is a lot of truth in the old proverb, "Better one bad master than two good ones."

At the same time, the hierarchical organization gives the most individual freedom. As long as the incumbent does whatever the assigned duties of his position are, he has done his job. He has no responsibility beyond it.

We hear a lot of talk these days about the individual's right to do his own thing. But the only organization structure in which this is remotely possible is a hierarchical one. It makes the least demands on the individual to subordinate himself to the goals of the organization or to gear his activities into the needs and demands of others.

Teams, by contrast, demand, above all, very great self-discipline from each member. Everybody has to do the team's "thing." Everybody has to take responsibility for the work of the entire team and for its performance. The one thing one cannot do on a team is one's own "thing."

No Single Answer

Organization builders (and even organization theorists) will have to learn that sound organization structure needs both (a) a hierarchical structure of authority, and (b) a capacity to organize task forces, teams, and individuals for work on both a permanent and a temporary basis.

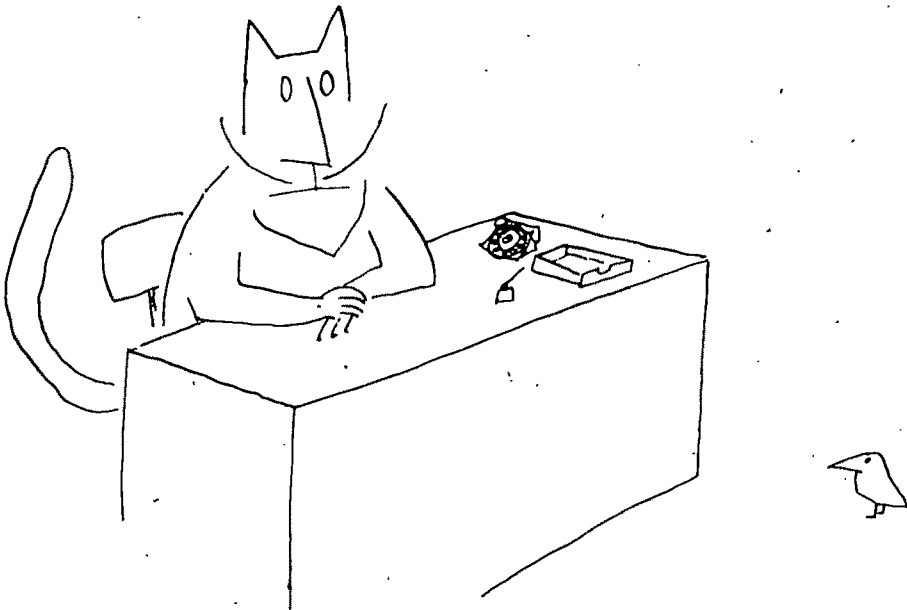
Organization theory and organization practice still assume that there is "one final answer," at least for a particular business or institution. In itself, this belief is a large part of today's organization crisis. It leads to doctrinaire structures that impose one organizational structure on everybody and everything—e.g., operating and innovating components; manufacturing and service units; single-product and multi-market businesses. And if any person or process, no matter how in-

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significant, seems out of place, a total reorganization has to be done to accommodate it.

Maybe there is one right answer—but if so, we do not yet have it. Indeed for certain businesses and institutions, such as a large airline or government agency, we do not even have one poor answer—all we have are a multitude of equally unsatisfactory approaches. But the organizing task will not wait; it will by necessity continue to be a central preoccupation of managers. Therefore, they had better learn to understand the design principles we already have. They must also learn the formal specifications of organization, and the relationships between the tasks of a business and the structures available to it.

The true lesson of the organization crisis is, however, quite different. It is that the traditional quest for the one right answer—a quest pursued as wholeheartedly by the new “heretics” of free-form organization as by the most orthodox classicists—pursues the wrong quarry. It misconceives an organization as something in itself rather than as a means to an end. But now we can see that liberation and mobilization of human energies—rather than symmetry, harmony, or consistency—are the purpose of organization. Human performance is both its goal and its test.



Drawing by Saul Steinberg. Copyright © 1956 by Saul Steinberg; from *The Labyrinth* (Harper & Row, Publishers, Inc.), originally in *THE NEW YORKER*.

THE GOLF ADDICTION

By Alistair Cooke

"No man in his right mind would ever play golf," declares Mr. Cooke. Yet 14 million Americans and many more millions around the world persist in that madness. Here a participating addict, frail in ego and tongue in cheek, explores the strange disease of golf addiction. His article is abridged from *The New York Times Magazine*.

Alistair Cooke, an Englishman by birth

and now a U.S. citizen, is best known as a commentator on the American scene for the British Broadcasting Corporation and for the *Manchester Guardian*. His books include *A Generation on Trial* and *Talk about America*. His most recent book, *Alistair Cooke's America*, based on a series of television scripts, was the number one nonfiction bestseller as the year 1974 opened.

They have been playing golf for 800 years and nobody has satisfactorily said why.

For of all forms of exercise theoretically designed for recreation and relaxation, none can be so unerringly guaranteed to produce nervous exhaustion and despair leading to severe mental illness and, in some cases, petulance. The consolation once offered by a helpful caddie to a British Prime Minister that it was "only a game" was enough to unloose a torrent of obscenity which had never before passed the statesman's lips. After an abominable round, a man is known to have slit his wrists with a razor blade and, having bandaged them, to have stumbled into the locker room and inquired of his partner: "What time tomorrow?"

Why should anyone persist in a game whose aim, in Winston Churchill's memorable definition, "is to hit a small ball into an even smaller hole with weapons singularly ill-designed for the purpose"? Well, it has been going on for so long that it is impossible to dismiss, like mahjongg or sex, as a passing fad. Bernard Shaw once proclaimed that the propulsion of a ball across open country with a stick was "a typical capitalist lunacy of upper-class Edwardian England." As usual, he summarily dismissed all the facts in the interests of a sentence with a lilt, for the

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lunatics so afflicted have remained a hardy race since Roman times at the latest.

Caesar's legions instructed the barbarian Britons in banging a leather ball stuffed with chicken feathers. That ball remained standard until 1845, when an English clergyman who dabbled in Hindu mythology received a statue from India of the god Vishnu wrapped in gutta-percha. It may well be that the Rev. Dr. Robert Adams Patterson saw in the gutta-percha wrapping a saving expression of the grace of God. At any rate, he made out of it the first gutta-percha golf ball and so became immortal. (The opposing school of thought, which maintains that the packaged god was not Vishnu but Siva—The Destroyer—is entitled to its opinion. That's as far as we're going to go just now with the effect of Hinduism on the composition of golf balls.)

A Dutch Invention

Anyway, at some unrecorded point during the nearly 2,000-year dominance of "the feathery" (55 B.C.—A.D. 1845) the Dutch placed a ball on a small mound and hit it towards a hole. Since the mound was called a *tuitje* (pronounced "toytee" hence *tee*) the hole a *put*, and the game itself *Het Kolven*, it seems clear that *golf*, in its essentials and its terminology, was a Dutch invention. The Dutch pretty soon saw where it was leading (to paranoia and the paralysis of their empire) and more or less abandoned it.

By then the Scots had seized on it and, no later than the 15th century, it posed a similar threat to the national defense, causing ordinary citizens who should have been off at archery practice to spend all their spare time trying to hit the damn thing straight. James II of Scotland was sufficiently alarmed at the neglect of archery to put out, in 1457, a decree commanding that "golfe be utterly cryed down and not to be used." It was too late. James did not recognize what every other Scot knew in his bones: that golf was just what the Scottish character had been seeking for centuries. Namely, a method of self-torture, disguised as a game, which would entrap irreligious youths into the principles of what was to become known first as Calvinism and then, through *het kolvenism*, as "golf." The main tenets of this faith are that life is grim and uncomfortable and that human vanity cannot prevail.

The emblem of the necktie reserved for the members of the Royal and Ancient Golf Club of St. Andrews—the Vatican of golf—is of St. Andrew himself bearing the saltier cross on which, once he was captured at Patras, he was to be stretched before he was crucified. Only the Scots would have thought of celebrating a national game with the figure of a tortured saint. Yet, as anyone knows who has labored for years to put together a serviceable golf game and seen it collapse in a single afternoon, the symbol is apt. St. Andrew triumphantly exemplified the golfer's credo: that Man should expect very little here below and strive to get it.

The Golf Addiction

The Golfer's Character

If there is one generalization that may be applied to the inveterate golfer, it is that he is never an idealist. It is impossible to imagine Ibsen, Dante, Shaw, Hitler or D.H. Lawrence sallying out on a Saturday afternoon to subject his ego so publicly to the facts of life. Every game of golf is an open exhibition of overweening ambition, courage deflated by stupidity, skill soured by a whiff of arrogance. It is possible to fake a reasonable bridge game and to affect a modestly consistent skill at swimming, billiards and, yes, tennis. Even a mediocre chess player can convey, with a little adroit gamesmanship, that he was plotting a combination that didn't quite come off. But every golfer, no matter how impressively he has talked up, or talked down, his game beforehand,

The author as victim: Mr. Cooke tries to blast out of a sand trap.



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proclaims in the simple act of standing to the ball—before he has even started to swing—that he is a fake or a duffer or—rare specimen—a golfer. (There are baffling exceptions. It is quite clear from watching the swing of Doug Sanders and the stunted finish of Arnold Palmer that neither of them will ever be a golfer.)

These humiliations are the essence of the game. They derive from the fact that the human anatomy is exquisitely designed to do practically anything but play golf. To get an elementary grasp of the game, a human must learn, by endless practice, a continuous and subtle series of highly unnatural movements, involving about 64 muscles, that result in a seemingly “natural” swing, taking all of two seconds to begin and end. Very few of us ever make it, and then not for long. No one makes it for ever. Jack Nicklaus, the best golfer of our day, and perhaps of any day, is at this moment busy working on some puzzling “defect” in his swing.

Yet the figures on the national addiction to golf are almost as alarming as the hard-drug statistics. When tennis was born, a century ago, the Scots had been at golf for 500 years at least. But there were no known American golfers. (It was tried out in New York, South Carolina and Georgia at the end of the 18th century and given up as hopeless.) Twenty years ago, there were calculated to be eight million hooked Americans; today, it is closer to 14 million.

There must be good reasons. The usual ones given by golfers to non-golfers are three: (1) That the game, unlike tennis, squash, pinochle, chess, *boccie* and practically every other competitive joust, is not played on the same dull rectangle or board or in the identical pit or alley the world over but is played across delightful varieties of open landscape. I should like very much to maintain that all golfers are nature lovers. Unfortunately, while all golfers know the difference between a bunker and a hole in the ground, legions of them cannot tell a cypress from a Cypriot. (2) That there is something tonic and bracing about the fact that you are totally responsible for the fate of the little white ball and that you have only one chance of hitting it correctly (there is no second serve, no third strike, no fourth down, etc.). (3) That golf offers the supreme challenge of playing, not against an opponent, but always and only against yourself.

Not for the Sane

The second and third reasons simply detail the objections, not the incentives, to playing golf and powerfully confirm what I seem to have been saying all along, that no man in his right mind would ever play golf. That is just the point. Nobody in his right mind does, no mature adult with a grain of what the French call *l'amour-propre*, which has nothing to do with girls and everything to do with self-respect. Right-minded men fish, grow petunias, run industries or the White House. (The best thing about Eisenhower's Presidency was his Jeffersonian convic-

tion that there should be as little government and as much golf as possible.)

So right at the start you can be sure, wherever you wander to pick up a game, that there are certain noxious types you will never have to meet: the proud, the self-regarding, the anxious. Anybody concerned for his "image" gave up golf as soon as he saw that his partners, in a single round, had fathomed his deep pretentiousness.

The main reason, I believe, for the lure of golf has to do with a unique brand of companionship possible only to a psychological type that unites the little boy aching to be king with the sensible adult who knows he'll never make it. It is the companionship of communal, low-key debunking, a willingness to invest three or four hours in proving to one and all the vanity of human wishes—especially the vanity of your closest friends.

"When a man laughs at his troubles," that irreverent commentator, H. L. Mencken, wrote, "he loses a good many friends; they never forgive the loss of their prerogative." Mencken abominated golfers and did not know them. If he had, he would have discovered the only worldwide secret society that revels in the mutual display of human frailty. By providing every man with the visible proof that his partner is a failing show-off, golf reinforces one of the great joys of friendship; it is all the more delicious for being secret, since the etiquette of golf requires that you keep it to yourself.

Don't suppose, though, that golfers are a particular species of meanie. They are a special kind of moral realist who nips the normal romantic and idealistic yearnings in the bud by proving once or twice a week that life is unconquerable but endurable. For the golfer compresses into a few hours all the emotions he spreads over the rest of his life: hope, envy, betrayal, self-discipline, self-deceit, the Holy Grail in view, the Grail smartly whipped out of sight. Whence Stephen Potter's profound remark that whereas, in the popular fallacy, golf is thought to be a microcosm of life, "the truth is that life is golf in miniature."



BOOK REVIEWS

THE WORLD'S GREAT ABSTRACTIONS

By Edmund Fuller

Mr. Fuller is a critic, editor, teacher, and author whose works include *Introduction to the Essay*, which he co-authored with O. B. Davis in 1972. His review is reprinted with permission of *The Wall Street Journal*.

Dictionary of the History of Ideas: Studies of Selected Pivotal Ideas. Edited by Philip P. Wiener with Isaiah Berlin, George Boas, Salomon Bochner, Felix Gilbert, Frank E. Manuel, Ernest Nagel and Rene Wellek. New York: Scribners. 4 volumes. 2,587 pp.

What is an idea? Daily we use the word far too loosely and casually for its real weight. We mix it up with "notion" in the sense of mere whim. Or we say, "I've got a great idea... a million-dollar idea!" Or, disclaiming knowledge, we confess: "I haven't the faintest idea!" And if, indeed, the saddest words of tongue or pen are, "It might have been," then the second saddest must be, "It seemed like a good idea at the time."

"Idea" is something so much greater than all that. It is "concept," and as such, the building block of all structures of thought. Ideas are abstractions, yet that brooding, prophetic novelist Dostoyevsky wrote continually and explicitly on the danger of playing irresponsibly with these alluring abstractions because "ideas have consequences." If they civilize men and advance them, they also crystal-

ize into ideologies and divide them. When abstract ideas are acted out they suddenly become terribly concrete. You and others may profit or lose from them, gain fame or shame by them, live or die because of them.

The late Richard McKenna, in his excellent essay about his self-education, "New Eyes for Old," describes how he struggled to expand his vocabulary, resorting to dictionaries to help him understand words new to him. But he found definitions of words insufficient to help him grasp many books. Then he became aware of "the existence of a kind of vocabulary of a higher order, a fundamental outfit of ideas which the writers of the books I could not read assumed their readers to possess." Without it, one may often read or hear words but not know what somebody is talking about.

An Impressive Work

Such a "fundamental outfit of ideas" is implicit in the title of an impressive new reference resource: *Dictionary of the History of Ideas: Studies of Selected Pivotal Ideas*. It contains 311 articles by 254 authors, some 13 of whom died before the project was completed. All the essays are substantial; a few are books in themselves, running to over 60,000 words under a single heading, in addition to the fact that there are whole constellations of articles on various facets of major concepts. I have spent many hours

reading in it, finding it fascinating. It is a large contribution to reference resources for which the publishers and all contributors and editors are to be praised.

The very first entry is "Abstraction in the Formation of Concepts," by Julius Weinberg, which is certainly grasping the nettle firmly. It plunges us at once into the formidable distinction between sense objects and objects of intellectual cognition. "Objects of knowledge really are; objects of sense are perpetually becoming." Here, as again and again in these volumes, we are carried back to Plato, Aristotle and the other fathers of philosophy. One is reminded of Alexander Pope's cautionary rhyme:

A little learning is a dangerous thing;
Drink deep, or taste not the Pierian
spring.

But we are by no means dealing wholly in abstract attractions. Historian Herbert Butterfield writes on "Balance of Power," "Christianity in History" and "Historiography." Oskar Morgenstern's article on "Game Theory" informs the nonmathematical that "the significance of game theory is that besides explaining games proper, suitable games can be identified *strictly* with important other human actions which they therefore *model*." An aspect of it is "decision theory," for "game theory represents a rigorous, mathematical approach towards providing concepts and methods for making reasonable decisions in a great variety of human situations."

George Boas is the only man here to write under a heading coined by himself: "Theriophily." It is based on a

Greek root, meaning "beast," plus the familiar "philos," to embody an ancient idea: admiration for and love of the ways and character of animals. Mr. Boas calls Diogenes the Cynic the "first theriophilist of significance." "Cynic" comes from the root for "dog," but has gone strange, indeed illogical, ways. He also quotes that marvellous theriophilic passage of Walt Whitman's beginning, "I think I could turn and live with the animals...." from "Song of Myself."

The Good and the Bad

Inevitably in a work of such scope, from so many hands, there is some good writing and some bad—the latter representing the turgid, jargon-ridden character of some "learned" writing. The general level of style is much higher than might be expected. In literature, I wish associate editor Rene Wellek had not preempted nine essays himself—much the greatest number for one writer—for although he is a scholar of eminence he writes with a leaden hand, which need not accompany even so dry a topic as "Periodization in Literary History."

Happily we have another literary scholar of no less distinction, Marjorie Hope Nicolson. In her long service at Columbia University she was known sassily, but affectionately and admiringly, to at least some of her students, as "Big Marge." When mandatory retirement ended her service there, she transferred her energies to Mills College, which knew a live article when it saw one and was not prepared to rusticate a great teacher because of a calendar. Ms. Nicolson not only knows style but possesses it,

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as shown in five articles, including "Cosmic Voyages" (she was one of the first scholars to recognize the literary legitimacy of science-fiction) and "Newton's 'Opticks' and 18th-century Imagination," which in her hands is a far livelier and literary subject than you might think.

In the "Dictionary" everything one might regard as "a must" is present: such topics as God, Time, Nature, Science, Myth, the Arts, Law (extensive study), Ethics, Linguistics, Mathematics. Many entries treat of more abstract conceptions such as: Free Will, Romanticism, Infinity, Ambiguity, Academic Freedom, and what not. It's interesting to find, in the opening of Leonard Krieger's essay on "Authority," that:

Originally, its dominant meaning was the capacity to evoke voluntary compliance or assent, on grounds distinct from coercive power or rational conviction. Currently its dominant meaning is the capacity to evoke compliance or assent, whether voluntary or not, on grounds which confer an official right upon coercive power and a compulsory force upon rational conviction.

But Shakespeare already understood both senses. For the former, the disguised Kent says to King Lear, "You have that in your countenance which I would fain call master." "What's that?" "Authority." For the latter, the distraught Lear cries, "Thou hast seen a farmer's dog bark at a beggar? And the creature run from the cur? There thou mightst hold the great image of authority: a dog's obeyed in office."

Thus one can ramble in these four

big volumes. Illustrations are used where needed. A good example is in the surprising, intriguing essay, "Chance Images," by H.W. Janson, which takes us from attitudes in antiquity toward accidental forms in nature—such as stone heads or images in clouds—down to Rorschach blots and such random techniques in painting as spattering, or *sprezzatura*.

Two contrasting triads are examined: "Faith, Hope, and Charity" (Mary Daly), and "Fortune, Fate, and Chance" (Vincenzo Cioffari). "Environment" is explored briefly by René Dubos. Denis de Rougemont writes on "Love," but says nothing quite so succinct as Thornton Wilder's wonderful statement, in "The Bridge of San Luis Rey," about Love as passion:

Not until it has passed through a long servitude, through its own self-hatred, through mockery, through great doubts, can it take its place among the loyalties. Many who have spent a lifetime in it can tell us less of love than the child that lost a dog yesterday.

This "Dictionary" is a carefully planned catch-all that freely confesses it cannot really catch all. It amazes by how much it has caught. It is interdisciplinary and international. Editor Philip Wiener says in his brief Preface that "the topics chosen are intended to exhibit the intriguing variety of ways in which ideas in one domain tend to migrate into other domains." It achieves that end, like a super-symposium. It will introduce any reader to much that he doesn't know and to new ramifications of what he does know.

LEGACY OF THE "BEATS"

By Aaron Latham

The literary movement called "the Beats" reached its high point of popularity and influence with the 1957 publication of *On the Road*, Jack Kerouac's autobiographical novel about the cross-country wanderings of sensation-seeking young people. When Kerouac died in 1969, he left behind a more complex novel that was a kind of sequel to *On the Road*. *Visions of Cody* has now been published and is reviewed here by Aaron Latham, an editor of *New York* magazine and author of *Crazy Sundays: F. Scott Fitzgerald in Hollywood*. His review is abridged from *The New York Times Book Review*.

Visions of Cody. By Jack Kerouac. New York: McGraw-Hill. 398pp.

Jack Kerouac's *On the Road* was the *Huckleberry Finn* of the mid-20th century. Kerouac substituted the road for the river, the fast car for the slow raft, the hipster in search of freedom for the black slave in search of freedom. At one point, Kerouac even planned to write a black boy into his story to insure the comparison with Mark Twain, then changed his mind. While Huck and Jim were floating down America's mile-wide Mississippi River, while Sal Paradise and Dean Moriarty were roaring by automobile across America's heart, they were helping to change the course of American prose.

Now, posthumously, Jack Kerouac's sequel to *On the Road* is being published; it is called *Visions of Cody*. The book may, at first, seem like a raft that has broken up—no order, no plan, everything afloat in the stream

of Jack Kerouac's consciousness. But if you can stand some disorder, you will find some of Kerouac's very best writing in this book. It is funny. It is serious. It is eloquent. To read *On the Road* but not *Visions of Cody* is to take a nice sight-seeing tour but to forgo the spectacular rapids of Jack Kerouac's wildest writing.

Visions of Cody is a bizarre book with a bizarre history. When Kerouac wrote *On the Road* in 20 days on a continuous roll of paper in 1951, friends like poet Allen Ginsberg read it and did not much like it. Kerouac had not yet invented the legend that he never rewrote anything, so he set to work composing inserts, which he hoped would make his friends like his book better. These inserts, however, grew uncontrollably. Jack Kerouac and Neal Cassady (the model for Cody) even tape recorded long conversations that were typed up and added to the stack of new pages. By the spring of 1952, the new sections were almost as long as the original.

Visions and Revisions

At some point in early 1952, Kerouac decided not to use the inserts to patch up his earlier work but to consider them a new book in and of themselves. He called this new work *Visions of Cody*. Kerouac was like a mechanic who had started out to repair a car with spare parts and had ended up building an entirely new vehicle instead. The form of the new book was no more what Jack Kerouac

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had set out to create than the form of *The Waste Land* was something T.S. Eliot had set out to create. It just happened, practically by accident, at least by indirection. *The Waste Land* achieved its disconnected quality when Ezra Pound cut out all of Eliot's connections; Kerouac's new book achieved its discontinuous structure when he decided to leave out the book for which his inserts had been written. He kept the repair parts but junked the car.

While working on the book, Kerouac came to believe in what he called "automatic writing," meaning that he tried to turn the job of composing prose over to his subconscious. This theory of composition was much like that believed in by, of all people, Mark Twain. Kerouac is normally compared to writers like Thomas Wolfe, Louis-Ferdinand Céline, or Jean Genet, but he also learned a lot from Twain.

Loosening up the Novel

Earlier, Mark Twain had discovered the American heartland as a subject and setting, and in the mid-20th century, Kerouac rediscovered the American continent for writers. But Twain not only discovered the heartland as a place; he also discovered it as a voice. By allowing Huckleberry Finn to tell his own story in his own words, he brought American vernacular into American prose. Almost a century later, when an effete literary language once again threatened to silence all other voices, Kerouac again discovered the vernacular. He also loosened the knots of plot that had

bound many writers.

Jack Kerouac even helped to rediscover what seemed like a new form: nonfiction written in the form of a novel. Twain had done the same thing in books like *Roughing It* and *Innocents Abroad*—two titles which could describe Kerouac's entire *œuvre*—but by the midpoint of this century most serious writers were writing fiction. Kerouac pointed writers back toward real experience the way it really happened as a subject for serious prose. He changed the names but that was all.

Jack Kerouac was also, I believe, one of the originators of a literary style described by Richard Poirier when he spoke of writers who "treat any occasion as a 'scene' or stage for dramatizing the self as a performer." Poirier never mentions Kerouac but he was one of the archetypes.

Jack Kerouac's influence can be seen with such disparate performing selves as Nelson Algren (especially in his remembrance of Hemingway), Jimmy Breslin (who attended Kerouac's funeral), Richard Farina (who himself died on the road), and even Truman Capote. When *On the Road* made Jack Kerouac famous, Capote delivered his famous one-liner: "That's not writing, it's just typewriting." But would he have written *In Cold Blood* as a non-fiction novel if Jack Kerouac had not helped to make the form respectable? Ernest Hemingway said, "All modern American literature comes from one book by Mark Twain called *Huckleberry Finn*." Shortly before he died in 1969, Kerouac told a friend, "I am Huck Finn." And he was.

THE AVANT-GARDE AND THE PUBLIC

By Anatole Broyard

Mr. Broyard is a staff book reviewer for *The New York Times*, where this review originally appeared.

Discovering the Present. By Harold Rosenberg. University of Chicago Press. 336 pp.

Harold Rosenberg ought to be read very slowly because he packs in more ideas per page than almost any other writer I can think of. When I read his work, I like to sit back every few minutes and let his sentences ricochet through my imagination. After finishing his previous book, *The De-Definition of Art*, I found myself wishing I had a month or two to mull it over, an adventure roughly akin, in my opinion, to climbing Mount Everest or sailing around the world in a small boat. Keeping us from deluding ourselves, or being deluded by others—this is Mr. Rosenberg's chosen task, and I can't think of a better man born in a better time for this particular assignment.

Discovering the Present is a collection of his essays on art, the cultural atmosphere, and politics. Since there are 36 essays in the book, I can't describe or discuss them all, so I will concentrate on Mr. Rosenberg's favorite theme: the strategies, strengths and absurdities of modern art. The author begins by remarking that the cultural revolution of the last 100 years has petered out, that far from being

shaken by modern art, society now supports it. However passionate and self-dramatizing its practitioners, "advanced art today is no longer a cause—it contains no moral imperative." The modern painter, for example, is inspired by "something he hasn't seen yet." He begins with the nothingness of space and invents the rest.

The Esthetic of Boredom

"Social and aesthetic far-outness," Mr. Rosenberg writes, "is a public relations technique aimed at the presumed indignation of a stable middle class that ceased to exist four decades ago." We should be protected against these impostures by education, whose purpose "is to keep a culture from being drowned in senseless repetition, each of which claims to offer a new insight." These "déjà-vu novelties" often succeed because "no degree of dullness can safeguard a work against the determination of critics to find it fascinating."

The esthetic of boredom is taken as a proof of purity, an unwillingness to make concessions to public taste. Such concessions, however, are unnecessary, for the public is quite prepared to accept boredom as an "existential" metaphor for the "meaninglessness of life." The poverty of a work is the critic's opportunity, his *tabula rasa*. On the other hand, a novel like Saul Bellow's *Herzog* is so interesting in itself that the critic is demoted to something like a guilty bystander.

Though it "contains no moral imperative," modern art is subversive, or "politically suspect," at least from the liberal point of view, in another sense. Its sensuality and passivity, its use of "superstitions, fixed ideas, perverse fantasies, self-hypnosis and other outlived areas of the psyche" are all forms of political apostasy. Even "the willing suspension of disbelief" can be seen, by extension, as a corrupting influence on the existing social order. It is normal for art to falsify facts in the interest of form. For the last 100 years, says Mr. Rosenberg, art has warred against its own nature in trying to get at naked, unadorned facts, which are not its business. In any case, no community is so well regulated that it can afford to dispense with the pacifying influence of the fantasies that art offers.

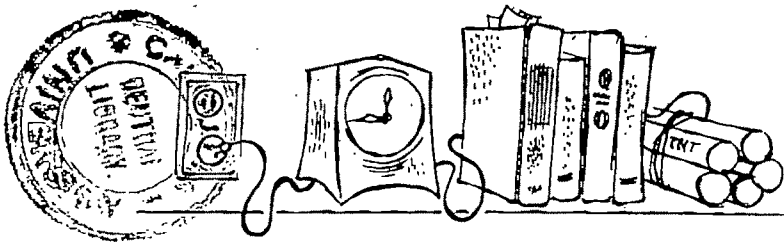
Art and the Human Personality

The sense of "injured being" of contemporary man has persuaded at least one sociologist that "the arts are about to destroy the human personality." That is, if the current obsession with "spontaneity" does not destroy the arts first. "In their sweeping away of ancestors," writes Mr. Rosenberg, "and their undermining of bourgeois self-confidence, the avant-gardes embody the cruelty and tragedy of modern life, that is, of life trapped in the consciousness of the dissolution

of forms and the temporariness of things. The stimulation of metaphysical uneasiness is an inevitable effect of avant-garde creations."

Yet this "metaphysical uneasiness" is a sign of liberation too, at least in a negative sense. We are slowly relinquishing what Raymond Aron called the "nostalgia for a universal idea" and submitting ourselves to the uncertainty of excursions into the void. While Walt Whitman said, "I loaf and invite my soul," our anxious age hires private detectives, in the form of artists, to locate our missing personalities. Simultaneously thrilled and afraid of what we will find, we are generally ambivalent toward the results.

If I were to try to sum up the prevailing mood of *Discovering the Present*, I would say that it goes something like this: The genuine artist is incorrigible—impervious to politics, to reason, to facts, to mercy. In his own peculiar way, he holds the mirror up to nature, and what we see in that mirror both chastises and encourages us. So long as we have this wholesale dealer in possibilities, this recycler of social debris, this grim clown, this priest manqué, this patent medicine man, this real estate broker of the unknown, this acrobat of being... so long as we have him lucubrating in his loft or garret, we can afford to smile in our sleep, even as we dream of tigers.



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Victor Gruen

THE ARCHITECT AS CITY PLANNER

Frederick Gutheim

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BOOK REVIEWS

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A NOTE TO THE READER

We shape our buildings," Winston Churchill once wrote, "and then our buildings shape us." Unfortunately, the great architects of the 20th century have been more successful with the design of buildings than with the impact of their structures on the life going on inside and outside them. Everyone recognizes the brilliant technological feats of modern architecture: the steel frame, the glass wall, the use of reinforced concrete to vault over enormous areas. And even those critical of the modern style can respect its intention: to bring simplicity and order into the chaos of our cities. But increasingly, architects and city planners are coming to believe that the dominant architecture of the past 50 years does not really meet the needs of a humane urban civilization.

The articles in our special section reflect the intellectual ferment that has made contemporary architecture so exciting a field and potentially so useful in finding congenial solutions to our urban needs. Several writers pay tribute to the "master builders" of the 20th century—Le Corbusier, Mies van der Rohe, and Frank Lloyd Wright. But Peter Blake concludes that "the time for individual heroes is past and the hero of the future must be the city itself, as it has been in all great periods of the past." William H. Jordy admires Mies van der Rohe but recognizes some validity in the criticism that he is too abstract and too austere. Frank Lloyd Wright's low-lying, informal "prairie style" homes have a human scale, but they require an abundance of space that makes them unsuitable for crowded cities.

What directions should architecture take in the future? Morris Lapidus argues for the pleasure that comes from the adornment of structures, even to the point of being flamboyant and extravagant. Minoru Yamasaki looks to Asian (and particularly Japanese) architecture for qualities of serenity and scale to balance the western world's passion for the monumental. Robert Venturi, as Franz Schulze points out, has become the spokesman for those younger architects who reject Miesian "purity" and want instead to include varied, contradictory and even "vulgar" popular elements in their work. Finally, Victor Gruen believes that today's architect must also be a planner who uses his knowledge of design and technology to renew old cities and build new ones.

Returning to Winston Churchill's aphorism, the challenge to architects is to shape buildings and cities that give the people who use them a sense of comfort, natural proportion, and esthetic delight.

N.G.

THE PROBLEM OF PRESIDENTIAL POWER

By Robert S. Hirschfield

The Watergate affair, culminating in the resignation of President Richard M. Nixon in August 1974, has caused Americans to reexamine the scope and limits of presidential power. How much flexibility should a President have to function effectively in an age beset by national and international crises? What political mechanisms are available to prevent a President from exceeding his legitimate authority? How does the popular will operate to encourage or constrain presidential power? These are some of the questions raised and analyzed in the following article by a leading political scientist.

Robert S. Hirschfield has observed U.S. politics both as a scholar and as an advisor to local and national politicians. He is chairman of the department of political science at Hunter College of the City University of New York. His books include *The Constitution and the Court* and *The Power of the Presidency*.



The resignation of Richard M. Nixon after the lengthy dispute over "Watergate," following the even longer national dispute over conduct of the Vietnam war, has focused America's attention on the problem of presidential power. The result has been a widening public debate—involving legislators in the Congress, scholars in the universities, and the American people generally—about the uses of presidential power in both foreign and domestic affairs.

Despite its current urgency, however, the problem of defining the scope and limits of presidential power is not new. On the contrary, it has been a matter of concern and controversy since the beginning of the Republic. From George Washington's time to our own, observers of the Presidency have held radically different views of its authority. Some have argued that the power of the office is excessive, dangerous to the preservation of constitutional order, a "matrix of dictatorship." Others have insisted that a powerful Presidency is the mainspring of our governmental system, the only effective means of meeting the nation's needs, the best defense of democracy.

In fact each of these contradictory judgments is valid. There are very different conceptions of executive authority simply because that authority cannot be precisely defined. The power of the Presidency is a complex phenomenon. It cannot be determined merely by reviewing

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the various roles and functions assigned to the President in the Constitution, or even by studying the history of what Presidents have actually done or gotten away with. The reality of presidential power *varies*, and what it is at any given moment is determined by five major factors: 1) the formal constitutional sources of executive authority as currently interpreted; 2) the state of the political system in which the Presidency is operating; 3) the personal attributes and attitudes of the incumbent President; 4) the particular set of circumstances confronting the nation; and 5) the popularity of the President and the degree to which he enjoys the public's trust and confidence. All of these factors change from time to time and from President to President. And since the power of the Presidency is the product of interaction among all of them, the dimensions of that power are also continually changing.

The Ambiguities of the Constitution

The Constitution creates an executive office which is potentially, but not necessarily, powerful. Like the rest of the document, the presidential provisions are general, indefinite, and ambiguous. The President is, for example, "commander in chief of the army and navy of the United States." But does this appoint him, as Alexander Hamilton insisted, only the nation's "first general and admiral," or does it empower him to use the armed forces in such a way as to commit the nation to war? Does his authority to make treaties by and with "the advice and consent" of two-thirds of the Senate require a sharing of power in the formulation and control of foreign policy, or does it mean, as the Supreme Court once said, that the President is America's "sole organ of government" in the field of international relations? The President is to "take care that the laws be faithfully executed," but faithful to what—the intention of Congress or his own determination of constitutional or political necessity?

When Woodrow Wilson said "the President is at liberty, both in law and conscience, to be as big a man as he can," he indicated the range of possibilities open to a President in attempting to exercise power, and emphasized that the greatest attribute of the constitutional office is its flexibility. It is this quality that allows for presidential energy, resourcefulness, and creativity, while it also permits passivity, indifference, or ineptitude. The absence of specificity and detail in the Constitution is that document's most distinctive and important characteristic, and it makes the Presidency potentially both the most dynamic and the most dangerous of American political institutions.

As a result of the growth of governmental authority generally, the increasing complexity of an urbanized society, the emergence of the United States as a world leader, and the demands of an era of protracted crisis, the Presidency has become a permanently powerful office. No

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matter who the incumbent may be, he is the focus of the American governmental and political systems, and his authority—particularly in foreign affairs—has become institutionalized according to the pattern of the crisis Presidencies associated with Lincoln, Wilson, and Franklin Roosevelt.

But the tension between security and liberty, between necessity and constitutionality, has not disappeared from the American scene. The need for presidential power is accepted, but the constitutional system cannot accept unlimited power. All governmental authority is circumscribed by the fundamental protections of the individual against arbitrary state action embedded in the Bill of Rights, by the structural principle of separation of powers, and by the corollary concept of checks and balances. The issue therefore is not whether the Presidency is a powerful office, but rather what are the limits of its power. And that, given the flexibility of the Constitution, is essentially a political question.

The Political System

If the question is clear, the answer is not. For the American political system is also amorphous and flexible. Operating simultaneously at two levels—national and local—it is exceedingly complex, allowing for the expansion of presidential power when the President can mobilize public support on national problems, but providing effective restraints on that power when he cannot. The growth of democracy has made the Presidency a tribunate office, so that today the President is politically as well as constitutionally, actually as well as symbolically, “the sole representative of all the people.” This development, which had its beginnings in the Jacksonian era of the early 19th century, has resulted in a Presidency potentially much more powerful than the monarchical office so feared by its early opponents. But presidential power is subject to limitation because of its dependence on public attitudes, and because changes in those attitudes can be reflected through governmental institutions which have countervailing power.

Although the President ostensibly heads his political party both in the country and in Congress, this party leadership does not give him control over the political process. There is no conformance between the President’s position of national leadership and the structure of American politics. At the root of this anomaly is the fact that the U.S. political system is locally rather than nationally based. The national Democratic and Republican parties are only federations of state and city political organizations which come together in tenuous alliance every four years to seek the substantial rewards of capturing the White House. It is the leaders of the major party organizations, the political chieftains of the largest states and cities, who choose the party’s presidential nominee and help mobilize the resources for his campaign.

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Unlike parliamentary systems, the American separates the executive and legislative branches of government politically as well as functionally. The President and Congress are selected and elected independently of each other; they represent different constituencies and have different interests. Candidates for local offices—Senators, Representatives, and other officials—are selected separately by local parties and local electorates, entirely without reference to the presidential nominee and in no way beholden to him. The so-called “national election” is primarily the presidential election and is in fact only one part of an electoral cycle in which the participants in national governance are chosen. Representatives are elected every two years (once at the time of the presidential election and again midway between presidential elections); and Senators every six years (with only one-third elected at the same time as the President).

The President vs. the Congress

The results of this process are as complex as the system itself. Because American politics is neither national nor disciplined, party and government have little relationship to each other. Since the presidential and congressional elections are separate, a party's nominee may capture the White House, while the party as a whole fails to win a majority of seats in one or both legislative houses. But in any event, party control of both the executive and legislative branches does not have the same effect as in parliamentary systems. For whether the President's party does or does not control Congress, independently-elected legislators are free to act independently of the President. Any President must bargain, cajole, or threaten to get what he wants in Congress. To achieve his legislative goals he must constantly try to form majority coalitions among members of both his own and the opposition party.

As a result, every President finds that leadership of party and Congress is his most difficult and frustrating job, whether it be John Kennedy with a legislature dominated by his own party, Lyndon Johnson with 35 years of congressional experience in fashioning working majorities, or Richard Nixon, whose party lacked control of both houses. And a President who has lost the confidence of the people finds that loss quickly reflected in Congress, as public criticism or hostility lead to legislative obduracy and opposition.

Because the political system divides the American people into separate presidential and congressional constituencies representing different interests and divergent views, it raises the constant threat of governmental stalemate. Nonetheless the system is resilient enough to permit unity, leadership, and action when necessary. As the Depression and wartime experiences demonstrate, the executive and legislative powers can be fused, partisanship sublimated, and presidential primacy accepted under the pressure of crisis.

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Even under normal conditions, the President has weapons at his disposal in attempting to lead Congress and the country: his position and prestige, his ability to communicate directly with the people, his capacity to reward or punish. The political base of presidential power—like the constitutional base—is flexible. And it is this flexibility of the constitutional and political systems which allows for presidential defense of the national interest while protecting the nation against that concentration of power in the executive which James Madison some 200 years ago characterized as “the very definition of tyranny.”

The Presidential Personality

The third element that must be considered in attempting to ascertain the scope and limits of executive authority has to do not with the system but with the personal attributes and attitudes of the President himself. Because the Presidency is a personal office, the incumbent's own view of his power plays an important role in shaping the dimensions of that power. Presidents do not often indulge in theoretical exposition of their ideas, and only occasionally has one expressed himself clearly or systematically on the subject of his authority. But such formal statements are not essential, since a President's views are revealed in the way he conducts his Presidency and confronts the problems of his time. Every President has some conception of the Presidency's power. In at least one instance (Woodrow Wilson) that conception was fully developed before the office was achieved. Among the other Presidents, some (like Lincoln) formulated their views of power under the pressure of events, some (like Kennedy) modified their views in accommodating to the realities of their situations, and a few (like Hoover and Nixon) held to views which circumstances had made untenable.

But however a President reaches his concept of presidential power, and whatever form that concept assumes, his own attitude and behavior are major determinants of the power he in fact possesses. Moreover, the President's conception of his functions and authority is a crucial factor in determining America's destiny, as John Kennedy pointed out in 1960 when he noted that “the history of this nation—its brightest and bleakest pages—has been written largely in terms of the different views our Presidents have had of the Presidency itself.”

“Weak” and “Strong” Presidents

Here again there are no definite rules, for the office is open to a wide range of background, experience, and temperament. But in attempting to assess the Presidents, observers have developed classifications—the “weak” and “strong” Presidents and Presidencies—which reflect the different ways that presidential power has been conceived and exercised. The categories are too simple, the standards of judgment too

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varied, and the connotations of "weak" and "strong" too value-laden, but as general patterns describing executive attitudes and behavior, the two classifications nonetheless provide a useful analytic framework.

The weak Presidents are those who regard the exercise of power as distasteful and the avoidance of decisive action as a virtue. By nature and philosophy, they are fearful of impersonal interventionist government and distrustful of popular leadership. The weak President believes that his office is strictly bound by the principles of federalism and separation-of-powers. He is reluctant to advocate or enforce policies that expand national governmental control and impinge on state or local authority. He considers Congress an equal and coordinate, if not superior, organ of government, and often expects the legislature to express the public will and formulate public policy. Rather than attempting to initiate programs, he directs his attention instead to efficient administration of the executive branch of government. The Presidency itself he sees as a moderative office, its influence as primarily moral and above partisanship.

In contrast, the strong President regards government as the appropriate instrument for achieving change in society, and the Presidency as the vital center of government. Historically associated with the development of mass democracy and the growth of social consciousness, the strong Presidency is power-oriented and attuned to assertive, charismatic, and visionary leadership. In terms of the governmental system, this Presidency reflects a broad view of basic constitutional principles and an expansionist attitude toward presidential power. National in his outlook, the strong President advocates the extension of national authority and is untroubled by the decline of localism. He attempts to join the political branches of government and to direct the legislative process. Needing widespread support to gain his policy objectives, he seeks to be both a popular and party leader.

A Place of Action

To the strong President, the Presidency is a place of action, the only office representing the national interest, the focal position in American government and society. For him, the Presidency's essential attribute is its power, and his purposes can be achieved only through the use of that power. Thus the strong President often resorts, particularly in foreign affairs, to independent action. Faced inevitably with resistance in Congress, he uses all the techniques at his command to overcome the constraints inherent in the political system, being constantly engaged in pressuring the legislature to enact his programs and going regularly to the people to generate support for those programs. His principal concern is not the administration of an inherited office but the use of that office to bring about change in American society.

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Despite the oversimplification apparent in these descriptions, and notwithstanding the fact that there are significant gradations of strength and weakness among the Presidents in these classifications, each of the men who has held the presidential office could probably be fitted into one of the two general patterns. Those designated by history and by students of the office as "Great Presidents"—Washington, Jackson, Lincoln, Wilson, and Franklin Roosevelt—were all charismatic personalities and forceful leaders who conceived their power broadly and used it boldly. Those Presidents who are universally regarded as "Failures"—Grant, Buchanan, and Harding—all suffered from an incapacity to lead, an inability to act, and confusion in dealing with presidential authority.

Caution is required in assessing Presidents, since even those who have been regarded as weak or mediocre were not necessarily untalented or inept. Rather, Presidents and their administrations have almost invariably been reflective of the dominant mood of their times. More important than rating Presidents or adjudging their strengths and weaknesses, therefore, is the fact that the weak and strong Presidencies have generally been associated with different historical conditions—the former with periods of normalcy, of consolidation, of national reconciliation and "good feeling"; the latter with times of tension, movement, change, and crisis. Nor is this surprising, since no President operates in a vacuum, and since his own conception of the Presidency's power is not alone sufficient to determine the reality of that power. A President may conceive of his authority in the broadest terms and yet be unable to use it, or he may view his authority narrowly and still be compelled to act in a vigorous manner.

Public Support

Two factors in addition to the President's own proclivities determine whether or not power can or will be used: the existence of circumstances or conditions perceived by the nation as requiring action, and the nation's willingness to support the President if he chooses to act. While circumstances, and particularly crisis conditions, can make vast authority available to the President, only a President who is prepared to act and whose popular support is firm can make the decision to use it. And conversely, no such presidential decision can assure the availability of power without the existence of conditions which justify and legitimize its use. Harry Truman was able to act on his own initiative and according to his broad view of inherent executive authority when the Cold War turned hot in Korea, but when the crisis atmosphere and public approval passed he could not apply the same concept to temporary seizure of the steel industry in the face of a threatened shutdown. John Kennedy could not move the country or Congress during a period of ostensible normalcy which he regarded as unperceived

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emergency, but he encountered no resistance when he alone decided the issue of national survival in the Cuban missile crisis. And while Lyndon Johnson found widespread support in 1964 for his attack on America's most critical domestic problems, by 1968 his ability to lead the nation had been dissipated by grave doubts regarding both the morality and the necessity of the war in Vietnam.

Only when it is apparent that the nation's fate is at stake does power flow to the President, though when such danger is clear his authority reaches its zenith, as illustrated by Lincoln's "dictatorial" regime during the Civil War, by Wilson's highly-centralized World War I administration, and by Franklin Roosevelt's executive-dominated government during the emergencies of domestic depression and global conflict. National peril creates conditions—psychological as well as constitutional and political—for the use of power by a power-oriented President. Partisanship and localism are sublimated, and Congress and the country alike turn to the President for leadership in time of evident emergency. It is not surprising, therefore, that all of the "Great Presidents" have held office during periods of great crisis.

The Consequence of Popular Disapproval

Although theoretically the twin fountainheads of executive authority are "the Constitution and the laws," in fact the sources of this prodigious power are necessity and democracy. The psychological need for clearly identifiable and deeply trusted leadership and the governmental need for focus, initiative, and decisive action in times of crisis form the base for the powerful contemporary Presidency. But in addition it is the combination of public attraction to the person and public support for a President's policies which makes resorts to extraordinary power effective. His role as popular tribune is essential to the acceptance of a need for action in defense of the national interest and to the exercise of whatever authority may be latent in the presidential office.

Neither Lincoln nor Roosevelt could have acted with such spectacular independence in meeting the challenges confronting them had they lacked solid public support, but with that support they could push their powers to the limits of constitutionality and beyond. Indeed, a number of strong presidents have received object lessons in defeat when they lost popular approval: Wilson during his unsuccessful effort to have the United States join the League of Nations, Truman in the steel dispute, Roosevelt when he presented his plan to "pack" the Supreme Court with his own appointees. The power of a power-oriented President is virtually unlimited if he enjoys the trust of the people, but if a President loses the public's confidence, his authority as Chief Executive is seriously impaired and his position as acknowledged leader of the nation may be jeopardized.

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Depending on how intent, widespread, and sustained is the public reaction against a President, the consequences of popular disapproval cover a broad range of constraints. Inevitably a President who cannot mobilize national support finds his leverage in Congress, and his effectiveness in areas requiring Congressional consent or cooperation, curtailed. At a more serious level of confrontation, the legislature and other centers of countervailing power may assert their authority and rebuff the President, as the Supreme Court did in declaring Truman's seizure of the steel mills unconstitutional and as Congress did by refusing to enact additional New Deal legislation in the wake of Roosevelt's abortive Court-packing plan. Public pressure can become so great that a beleaguered President may be compelled to "campaign" for popular support or he may attempt, as Lyndon Johnson did, to calm the situation by announcing that he will not seek another term in office.

Ultimately, if public reaction to the President reaches a crescendo of outrage and opposition, Congress may turn to the only remedy for executive change provided by the Constitution—impeachment (analogous to indictment) by a majority vote of the House of Representatives, followed by trial before the Senate with the Chief Justice presiding, in which a two-thirds vote for conviction results in the President's removal from office. The impeachment process, often threatened, has been carried through only once in the nation's history—against Lincoln's successor, Andrew Johnson—and in that single instance the Senate failed to convict by one vote. Thus no President has ever been removed from office, and only one, Richard M. Nixon, has ever resigned under pressure. But the power of any discredited President declines in direct proportion to his loss of public approval, and to the extent that popular sentiment remains negative, he loses the capacity to function effectively as the country's leader.

A Pragmatic Institution

In a governmental system noted for its pragmatism, the Presidency is America's most pragmatic institution. The office is truly a mirror of the nation's life, reflecting accurately the events that have made its history, the men it has chosen, for better or worse, to deal with those events, and its own willingness to entrust them with enormous authority over its future. The power of the Presidency is ultimately determined by a complex of interrelated factors, the crucial one being the will of the people themselves; as a result, it is a flexible and resilient office whose form has remained undisturbed for almost 200 years although its substance—that is, its power—has constantly varied.

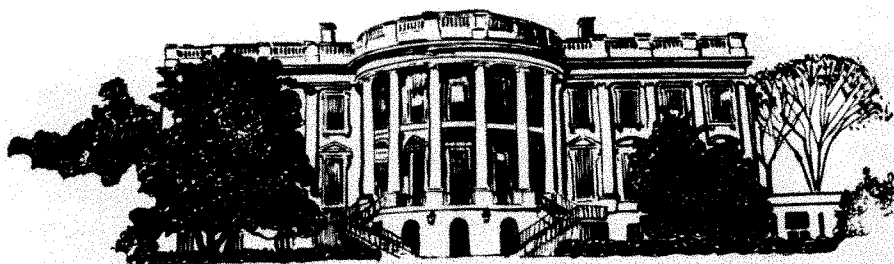
Today Americans have come to accept a powerful executive as normal because crisis is the normal condition of our time. But the Presidency is still a highly personal position, and it still leaves room for substantial differences among Presidents with regard to their com-

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petence, character, and capacity for leadership. Most important, there are still great variations in the mysterious chemistry that determines the relationship between the President and the people.

Presidential power has most recently come under attack because presidential warmaking in Vietnam divided the nation deeply and because activities of executive aides and of the President himself appeared to many Americans to have threatened the basic principles of constitutional government. In response to these disturbing events, Congress has already acted to circumscribe the executive's ability to commit the nation to war without legislative involvement, and congressional committees have recommended measures to protect the domestic political process from improper use of executive authority. But while present circumstances make these efforts appropriate and necessary, tinkering with the constitutional and political systems is seldom either wise or effective. And while reaffirmation of the principles of separation of powers, of checks and balances, and of inviolable rights is long overdue, serious consideration must be given to the long-range implications of any attempts to change the fundamental nature of the Presidency.

For the nation should remember that a strong executive has been its indispensable instrument in meeting crises at home and abroad since the Republic's inception. That the vast power of the office creates real danger is now more clearly recognized than ever before, but the answer to the problem of presidential power is not an emasculated Presidency. Maintaining the balance between liberty and authority is the basic problem of all free societies, and American society—through the expression of public sentiment in the press, Congress, and the courts—has demonstrated that it is capable of restoring that balance when the wielders of executive power abuse their trust. The "system" is working, and this fact points to the most meaningful way in which the American people can meet the problem of presidential power: by retaining confidence in the Presidency, while insisting that presidents operate within the framework of constitutional democratic principles.



The White House

AID AND DEVELOPMENT: A NEW PARTNERSHIP

By Kenneth M. Thompson



The author finds the present mood of pessimism about the impact of foreign aid on development to be based on superficial analysis. On the contrary, he believes that the remaining years of the 1970's offer the most fruitful opportunities for partnership to date, if the participants will learn from the lessons of past successes and failures.

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As we approach the mid-1970's, several trends in world politics have converged to shift the arena for competition and cooperation among the super-powers to the developing world. It is no accident that when international conflicts have erupted, the scene has been not Berlin or the Balkans, but Suez, Korea, Vietnam. And always the ingredients of strife have included economic imbalances, social injustice, and political and military disjunction. Robert McNamara, president of the World Bank, has pointed out that in 1966 there were 27 nations which had per capita incomes of \$750 or more a year since 1958, and that only one of these 27 nations had suffered major internal upheavals. By contrast, 32 of the 38 very poor countries with per capita incomes of less than \$100 per year had been victims of significant conflicts. In that eight-year period, 87 percent of the very poor nations, 69 percent of the poor nations, and 48 percent of the middle income nations had been plagued by internal strife and violence, leading McNamara to conclude "there can... be no question but that there is an irrefutable relationship between violence and economic backwardness. And the trend of such violence is up, not down."

Is it any wonder then that the call has gone out both to the powerful and rich nations and to agencies of the world communities to mobilize resources before conflicts break out? The call is to identify root causes of conflict and anticipate situations capable of leading to war. No one would claim that the approach can be as straightforward and

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direct as the war against disease or hunger; the enemy is more chameleon-like than the *Anopheles gambiae* mosquito or wheat rust. What so tragically hampers American thinking is the cultural lag, reminiscent of laissez-faire thinking on military and strategic problems before World War II. It is the belief that Americans come empty-handed to problems of development in the world because the United States is rich, powerful and affluent, while the developing nations are poor, powerless and deprived.

An Underdeveloped America

Yet the evidence of history leads to the opposite conclusion. However developed today, the United States is a country which has known the problems of underdevelopment. As recently as the early 1900's, poverty and disease were rampant, especially in rural areas. At most two out of every hundred households had electric power. Public health was lacking and malnutrition was often the cause of death. Dysentery and typhoid were endemic and smallpox and hookworm threatened the South. Only nine percent of the population were high school graduates. The average annual per pupil expenditure was \$32, with teachers' salaries rarely exceeding \$500 per year. Per capita health and welfare expenditures were \$10, compared with approximately \$3,921 in 1970. Thirty-five percent of Americans lived in cities, compared with 73 percent in 1970. There were no income taxes and no social security, no laws against poisonous drugs or spoiled foods, no bathrooms or sanitation, not even outdoor privies, in many rural areas. In transportation, America in 1900 was a horse and buggy society and a journey from Philadelphia to Washington took as long as today's flights to the moon.

Now, all this is changed. No point is served in debating whether today's developing society around the world is better or worse than America in 1900. The central fact is that change has occurred—from a once rather backward society the United States has become a developed one. But this transformation did not occur in isolation. From the beginning, Americans have participated in cultural relations with other nations, first as consumers and then as producers of transferable ideas and institutions.

The historian Richard Morris characterizes the United States as one of the early developing nations that received, sifted, and adapted a cultural heritage for which others had paid the price. Moreover, the transfer took place on American soil as Englishmen, Frenchmen, Spaniards, and many others shared their arts and letters, religion and constitutionalism. If diplomacy and European power politics had a bad name, the cultural heritage of the Old World had a favorable image for the Founding Fathers. Benjamin Franklin and John Quincy Adams went abroad to reinforce ideas of individualism and freedom, and also to steep themselves in European thought. American philosophers and

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scientists, theologians and artists made their way to Heidelberg and Berlin, Rome and Paris, Oxford and Cambridge as the acknowledged seats of culture and learning. James Bryce and Alexis de Tocqueville—an Englishman and a Frenchman—were the premier cultural interpreters of 19th century America.

At the same time, students began coming to America starting in 1784 when the Latin American liberation leader, Francisco de Miranda, matriculated at Yale University. By 1904, a total of 2,673 students from abroad had enrolled at American colleges and universities. If early relations with Europe were hedged about with a sense of inferiority, those with Latin America and Asia were fueled by a missionary impulse combined with a voluntarism unique to the American scene. Educational exchanges in other lands had been the province of the state and its premier institutions; in the United States, the humblest institution saw itself as having obligations. Only if one recognizes the missionary impulse and the spirit of voluntarism central to the American national character is it possible to account for the present massive and wide-ranging sweep of cultural exchanges, mounting to nearly 150,000 foreign students in the United States today.

Coupled with voluntarism and the missionary spirit is a third factor, the overriding concern of a certain type of American educational institution to serve the community in grappling with its most immediate and urgent problems. The land-grant universities, which have become the great state universities of the American mid-West, were the foremost educational invention of the 19th century. Their purpose was to put educational resources to work for farming communities; their watchword was "relevance"—long before it entered the vocabulary of contemporary college students. Universities patterned after the historic centers of European learning had often been successful in training national leaders. But it required the great land-grant universities to prepare men for the pressing needs of rural areas.

Criticisms of Foreign Aid

To a not inconsiderable extent, present-day educational and technical assistance programs are a secularization of the missionary movement, substituting food for faith and medical healing for conversion. The compulsions of the early mission carry over into the present, reinforced by the transformation of the national mood from isolationism to internationalism.

But it has become fashionable in recent years to proclaim that U.S. foreign aid is no longer relevant to the urgent problems of hundreds of millions of people who are caught up in a desperate struggle for survival in nearly 100 developing nations. Discouragement over help by the developed countries has been fed by two erroneous assumptions which gained prominence in the 1960's—first, that the wealthy coun-

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tries, faced by mounting problems at home, lacked the resources and know-how to help; and secondly, that past efforts were but a melancholy record of failure, waste, and incompetence. The first assumption is belied by the tiny fraction of concessionary assistance proposed (seven percent of the combined gross national product of the affluent countries by 1975, only half of which, it appears, will be realized). The second is a judgment which can be made of all large-scale national and international efforts. Yet it would be difficult to match such success stories as the Green Revolution in simple cost-benefit terms.

What is commonly asked of worldwide efforts undertaken against overwhelmingly odds is something we rarely ask of more limited and pinpointed national efforts, as in programs aimed at equal opportunity. Even in countries which achieve respectable economic growth rates or impressive increases in food production, the poorest are often left behind. When this happens close to home, Americans redouble their efforts to reduce the income gap. What is tragic is the almost total lack of public awareness that this is the process in which the enlightened agencies in development assistance are more or less continuously involved. Mankind is only just discovering the harsh fact that it has one future or no future at all.

A Case Study of Partnership

For development, what is needed most is honest talk about the purposeful exchange of knowledge and skills, especially knowledge and skills which can be used for solving the most urgent world problems. Three questions are worth raising for those who would join in a cooperative international development program: (1) Is there a clear, evident, and identifiable problem mutually set forth by would-be partners as an urgent priority need? (2) Is there consensus that knowledge and skills sharply focussed and patiently sustained will result in solutions to the problem? (3) Is there intercultural receptivity based upon a common recognition that local skills are lacking, external assistance is needed, and the values of cooperation will far outweigh socially disruptive consequences? Assuming affirmative answers to all three questions, the corollary is a profound awareness, reflected more in action than words, that those who come to help must also come to learn.

One case study in which every facet of a true partnership for development can be traced is the cooperative Mexican Agricultural Program of the Rockefeller Foundation fathered by Dr. George Harrar and his colleagues, including Nobel Prize winning scientist Norman Borlaug.

In 1941 the Foundation was invited by the government of Mexico to join in helping to solve a clear, identifiable, and high priority problem, a severe crop deficit in corn, wheat, and beans. Low yields were insufficient to satisfy the needs of 16 million people and economic growth was frustrated by the need to use scarce foreign exchange to import

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corn and wheat. The Mexicans lacked the trained personnel and the know-how to solve the problem but had confidence that working with American agricultural scientists they could find answers.

A three-man survey team drawing on the legacy of American agricultural experience (especially the role of land-grant universities) traveled extensively throughout Mexico, examined the way crops were grown and learned all they could learn about the situation. They found that Mexican wheat varieties then in use were low-yielding, genetically impure, and subject to wheat rust. Practically all the existing varieties had to be grown in irrigated areas; where there was rain, fungus grew and the wheat died. The bulk of available land was unused and irrigation was unavailable for other crops when needed. The situation for corn and beans was much the same. This was "the problem" and Mexicans and Americans set out to find "solutions."

From the start the informing first principle was that this must be a Mexican program. Headquarters were in the Ministry of Agriculture in a specially created Office of Special Studies. The successes were Mexican, as with the "Mexican Wheat" sent to India and Pakistan, but Mexico also had to live with the consequences. It remained a solid partnership in good and bad days, and a true experiment in international cooperation. The professional staff of "outsiders" never exceeded 10 to 12 scientists. Key personnel on both sides put on overalls and went out into the field—and ultimately developed hardy, disease-resistant, high-yield grains. Today, besides those in Mexico (corn and wheat), there are similar international institutes in the Philippines (rice), Colombia and Nigeria (tropical agriculture), Taiwan (vegetables), India (arid lands agriculture), and East Africa (livestock and animal sciences). The problems these institutes deal with differ, but all of them are building on and extending the principles of the Mexican program.

Debate on the "Green Revolution"

The successes of the "Green Revolution" and the changing circumstances under which it is evolving have stirred up a debate among its defenders and its critics. The major criticisms have focused on its potentially harmful economic effects. It is argued that the successful application of the high-yielding varieties requires considerable financial resources or easy access to credit in order to purchase the necessary complementary inputs, such as fertilizer, tube wells and the like. This need for ready access to capital or credit threatens to bias the benefits of the Green Revolution in favor of the already prosperous large land-owners, thus exacerbating the disparities of rural income in developing nations.

A second argument of the economic dissenters relates to the employment implications of the Green Revolution. Since the new varieties are subject to considerable economies of scale, especially when

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applied through mechanized production techniques, the critics see a built-in tendency for the larger farmers to gain a decided competitive advantage over their counterparts on smaller landholdings. It is claimed this phenomenon can only lead to the eventual consolidation of land in the hands of a few, while the many are driven off their land to swell the ranks of the rural underemployed or, more likely, to join the armies of the urban unemployed.

Unlike the historical experience of Western Europe and the United States, however, the capacity of the urban industrial sector of less-developed nations to absorb these "surplus" farm workers is extremely limited. Thus, some maintain, the Green Revolution has within itself the seeds for another kind of revolution as the vast armies of the rural and urban unemployed begin to assert their claim to a fair share of the fruits of economic progress.

No Single Factor

Yet it is as naive and myopic to lay the blame for widespread political and social unrest on a single factor such as the Green Revolution as it is for its proponents to make equally exaggerated claims about the economic bonanza that societies will reap from its harvest. The movement to the cities antedates the Green Revolution by several decades. There is nothing inherent in the new technology of grain production *per se* which necessarily must lead to more unequal distributions of farm income or more widespread rural and urban unemployment. If income disparities widen greatly and unemployment rises sharply, it will be due more to defective governmental policies regarding the distribution and application of the new varieties and their complementary inputs than to the nature of the new varieties themselves.

To take a simple example, studies of the new rice varieties have shown that they are equally adaptable to small and large farms, and that their net employment effects range from neutral to slightly positive, with the increased demand for labor as a result of multiple cropping offsetting the decreased demand for labor in land preparation. It may be true that in areas where the new varieties have been most successfully adapted, such as the Indian Punjab, there has been a tendency for greater income disparity and less employment. However, these phenomena are probably due not so much to the new varieties themselves as to the policy framework in which they have been applied. Specifically, policies that encourage premature tractor mechanization through special tax concessions, overvalued exchange rates, and various questionable import arrangements—all of which artificially cheapen the price of imported capital equipment—probably contribute more to the undesirable income and employment effects than the technology of high-yielding food grains.

Thus, as so often happens in "great debates," both sides seem to have lost sight of the basic issue. In the case of the Green Revolution, the

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basic issue is how the spectacular achievements of the new technology of food production can best be applied so as to achieve the *multiple* objectives of greater yields, higher incomes more widely distributed, and greater employment opportunities. These objectives are clearly attainable. They can be realized, however, only through a cooperative effort on the part of agricultural and social scientists working together.

Lessons in Institution-Building

The other area in which development assistance has proceeded on the basis of the "Mexican" model has been in assistance to universities in developing countries. The lessons learned from this experience in institution-building have yielded certain general working principles. *First*, concentration is essential to assure the form and quality of assistance required. For a recipient to benefit significantly, a certain critical mass of help is required, whether it takes the form of personnel, material resources, or capital. The leadership of developing institutions is quick to measure the extent of commitment of cooperating bodies. Comparisons are made between visitors who come to stay and those who never unpack their bags. Full and frank exchange of ideas is the result, not the forerunner, of mutual commitment. Yet immediate, unguarded, and self-critical discussion is vital if assistance is to make a difference.

To mold a partnership in institution-building is to build a framework within which consultation goes on and mutually acceptable, far-reaching decisions are made. By contrast, casual involvement in institutional development results in hit-or-miss direction of those actions that shape the future. Whether the subject is selection of a fellow for study abroad or reworking the syllabus or planning a new curriculum, the partners are engaged in what is ultimately the institution's most serious business. Success or failure depends on whether these topics are considered casually en route to the airport or through the solemn and deliberate processes of ongoing institutional life.

This concentration puts the responsibility on local leadership and national sponsors. Just as some developing nations fail to make the hard decisions prerequisite to truly benefiting from foreign assistance, some educational institutions in these countries fail to prepare themselves for genuine organic growth or development. They do not produce a practical plan for upgrading faculty, they neglect research opportunities, they overlook salary problems, or they forget about community involvement and support.

A *second* principle that we can glean from the broad range of private assistance underscores the importance of identifying specific and manageable areas of assistance. This need is an outgrowth of the essential nature of technical assistance. Outside help is inevitably marginal help. At the peak of the Marshall Plan, the flow of aid never exceeded

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four percent of Europe's capital needs. Assistance agencies must come to a judicious determination of the focus of their aid. What are the recipient country's most urgent and pressing needs and what is it doing about them? What is it doing for itself and what does it seek from others? What capacity does the donor agency possess, or can it acquire, for assistance in those areas where it can make a difference?

A Career Service

A *third* principle is the vital importance of continuity, and a *fourth* is a career service of men engaged in assistance to developing institutions, so as to maintain a high level of professional competence. The Rockefeller Foundation, in its University Development Program, has been encouraged by the interest of first-rate scholars in serving abroad as visiting professors, heads of departments, and even deans. Some have been recruited as regular Foundation staff, others as temporary personnel, and others as scholars on leave from their own universities.

A career service for university development must be flexible enough to provide for commitments ranging across a sliding scale of interest. Some will be engaged more or less permanently, others for a year or so. Perhaps the success of the American educational effort is greatest when the approach is indirect and oblique. American agronomists, economists, or virologists probably contribute most when they labor as scientists and scholars drawing on the full range of knowledge which they can appropriate not because they are Americans, but because of professional competence. Their contributions are most likely to be realized within the framework of an organized, concentrated, career-oriented approach to institution-building abroad.

A *fifth* principle is the need to build supplementary structures and arrangements for strengthening institutions abroad. The U.S. AID philosophy of sister university relationships was a creative invention for institution-building, but suffered in its implementation. It was plagued by misunderstandings, mediocrity, and inflexibility, but the heart of the idea was sound: university-to-university cooperation can serve both the institutions and their personnel.

A final observation is the need for scientists to be ever mindful of the interrelatedness of human progress. The successes of foreign assistance create new challenges and problems, some more exacting and serious than the failures. Improved health, lower mortality rates, and longer life spans contribute to the population explosion and thereby add to a nation's problems. We see now some of the hazards in pursuing health or agricultural programs in isolation. The unique opportunity presented by university development is that advances on one front can be coordinated with determined and concentrated efforts along other fronts. Programs in improved health delivery systems can go on simultaneously with population control. Efforts to increase food production can be

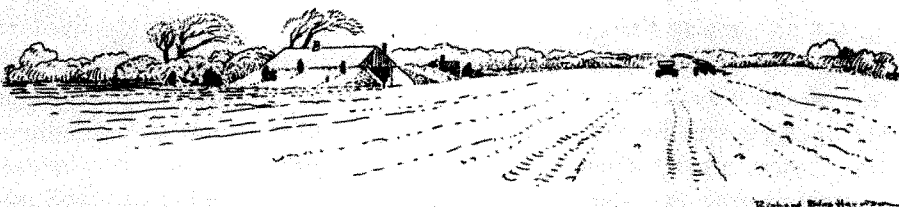
Aid and Development: A New Partnership

accompanied by inquiries into the economic and social consequences of the Green Revolution. The goal in each instance is to assist the developing countries in preparing for the problems that lie ahead three, five, or ten years down the road.

Universities and Development

More than is generally known, there are success stories in educational assistance as universities have turned to urgent national needs. The Universidad del Valle in Cali, Colombia, is a developing university which in the space of 22 years, with help from outside agencies, has built an institution for serving the community in public health and rural development. Now its principal intellectual leader, Dr. Gabriel Velasquez, is engaged in an effort to accomplish a similar development at the University of Bahia in Brazil, with a strong emphasis on both rural and urban development. Universities in Nigeria and East Africa, with colonial traditions which may have inhibited development, are for the first time turning strongly to rural development programs. Dr. Sterling Wortman of the Rockefeller Foundation has made the useful suggestion that students in agricultural colleges be required to spend a year's internship in crop- or animal-oriented research programs aimed at serving regional development needs.

It would seem that never before have opportunities been so great for partnerships between rich and poor nations to serve developing countries. There is a significant fund of experience on which to build. The response will depend on the will of the privileged nations to help those who reach out for assistance, as well as on the capacity of the recipient nations to use that assistance for long-term development.



special section

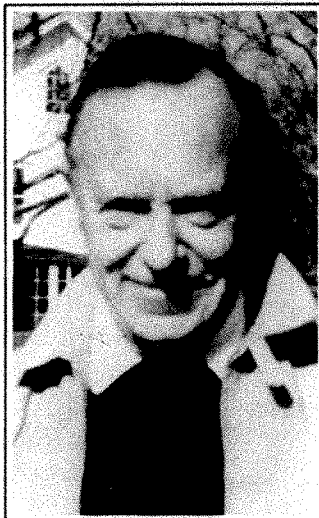
Architecture and the City

THE RISE OF A MODERN ARCHITECTURE

By Peter Blake

The crucial principles of 20th century architecture, writes a noted critic and architect, were laid down by three masters: Le Corbusier, Mies van der Rohe, and Frank Lloyd Wright. But, he adds, the time for individual heroes is past. The challenge for the current generation of architects is to use the new technologies and new design concepts to create city landscapes that are coherent and respect the human scale.

Peter Blake was for ten years editor of *Architectural Forum*, the leading U.S. journal in the field, and is now editor of *Architecture Plus*, which has incorporated the *Forum*. He is a practicing architect and was formerly curator of architecture and industrial design at the Museum of Modern Art in New York. His book *Master Builders* has been widely acclaimed as one of the outstanding works on the modern movement in architecture.



At no time in the recorded history of architecture has the manner in which men build undergone changes as radical as those that have occurred during the past century. Under the pressure of the tremendous growth in the earth's population, new developments took place in almost every field of human endeavor; but these developments were nowhere more spectacular than in the field of architecture.

Because more and more people had to be housed and employed in large urban centers, builders had to learn to build vertically. Technology provided two essential tools: the steel-framed building that could rise to great heights without requiring enormously thick walls at ground level; and the mechanical elevator. Because more and more goods had to be manufactured by mass-production methods on large assembly

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lines, builders had to learn to roof over very large spaces with uninterrupted spans, and technology again produced the answers in terms of great iron-and-glass halls and, later, in terms of large, reinforced concrete vaults. And because transportation and communication became essential tools without which a mass society could not hope to function properly, builders had to learn to construct great bridges and viaducts, great railroad sheds, canals, and harbors.

Indeed, most of the building types that are now a part of our daily lives did not even exist before 1850. The modern factory, the modern skyscraper, the shopping center, the modern school, and the modern hospital—all these are completely new inventions, with almost no antecedents prior to the middle of the 19th century. When architects first developed some of the new building types, they had a very hard time finding the right “style” for these new-fangled structures. For the 19th century was entirely eclectic, and every respectable building (the architects thought) had to follow stylistic precedent—whether medieval-romantic, or renaissance-classical.

A New Vocabulary

But where in the Middle Ages or in the Renaissance was there a precedent for a skyscraper? Where was there a precedent for a steel mill or a railroad shed? Some architects evaded the issue by deciding, quite simply, that these new building types belonged in the realm of engineering rather than polite architecture. Others tried to stretch the eclectic patterns to fit the new facades—and failed. And there were a few—a very few—who faced the new problems squarely and saw in them a great challenge to their creative abilities. These few architects and engineers displayed an inventiveness unmatched in any other period of building. Within the span of a single generation, this handful of pioneers in effect created an entirely new vocabulary of building types, and gave each of these building types a distinctive and expressive face of its own.

These early pioneers are now a part of architectural history: Louis Sullivan, the Chicago architect who, almost single-handedly, turned the skyscraper into architecture; Joseph Paxton, the landscape designer who built the London Crystal Palace in 1851—an exhibition hall covering some 18 acres of ground; and others before and after him, in England, France, Germany, and the United States, who created the first great structures of iron and glass. Finally, came the theorists and practitioners who, in metal, glass, and stone, reasserted certain qualities of unaffected structure and unadorned form. All of them laid the foundations for what we know today as modern architecture.

Yet, regardless of the spirit of the times, regardless of the daring of engineers and the vision of those architects who broke with the past, modern architecture could not have gone far beyond purely utilitarian

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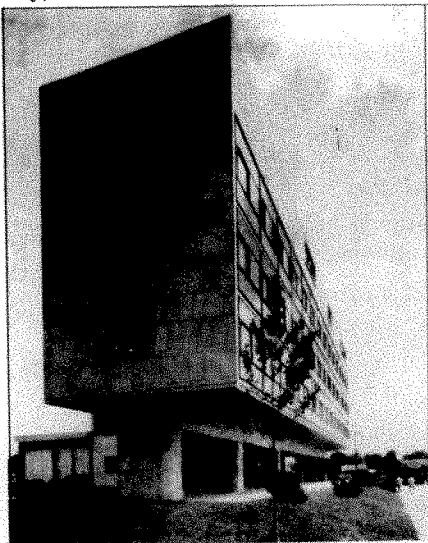
solutions without the appearance, around the turn of the century and in the decade following it, of half a dozen great individual artists who knew, instinctively, what they must do with the new tools at hand.

In my book, *Master Builders*, I chose to examine three of this small group: Charles-Edouard Jeanneret, better known as Le Corbusier, native of Switzerland and later citizen of France; Ludwig Mies van der Rohe, native of the German Rhineland and later citizen of the United States; and Frank Lloyd Wright, an American largely of Welsh ancestry. These three did not do it alone; indeed, there were others who may have contributed a great deal more in certain areas of modern architecture. Walter Gropius, who directed the Bauhaus school in Germany during the 1920's and later headed the school of architecture of Harvard University, certainly did more toward the establishment of a modern *rationale*—in architectural education, in the industrialization of building, and in the analysis of social problems—than any of these three masters. Eric Mendelson, Alvar Aalto, Richard Neutra, and others produced many solutions of a much more practical nature than the three men we have singled out. And there were engineers like Robert Maillart, Eugène Freyssinet, and Pier Luigi Nervi, who understood much better the potentialities of all the new structural techniques that the masters discussed so airily and sometimes experimented with so primitively.

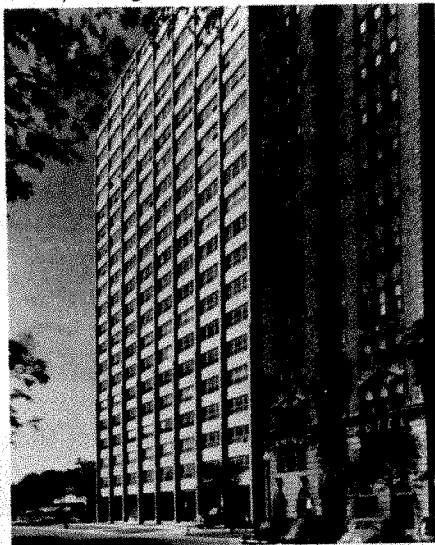
Poetic Visions

Still, Le Corbusier, Mies, and Wright will ultimately appear more important than their contemporaries because they were greater as artists. All three had a sort of poetic vision of the world they lived in, and, in trying to give form to this poetic vision, they often advanced farther

Le Corbusier: Swiss Pavilion, University City, Paris.



Mies van der Rohe: Promontory Apartments, Chicago



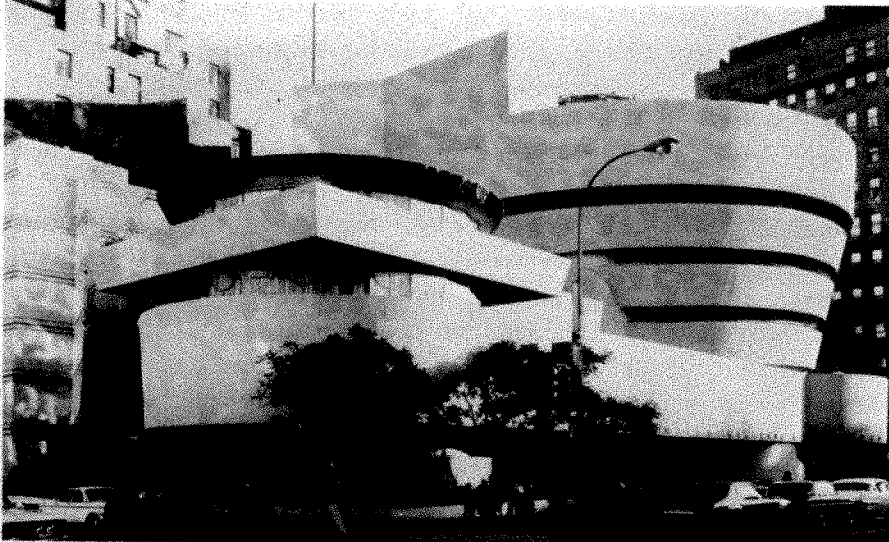
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and more daringly than their more rational fellows, who were handicapped by the more prosaic limitations of the moment. Many of Frank Lloyd Wright's early flat roofs leaked; so, presumably, did Chartres. Much of Le Corbusier's concrete has cracked; so has the Parthenon. Mies van der Rohe's buildings, it is said, are not always comfortable; neither, one suspects, was Hadrian's Villa. Great buildings tend to have several lives: Life One begins as the building is completed; its success or failure is then judged according to whether or not the building works. Life Two begins a generation or two later, when everyone has forgotten whether the building worked out particularly well in terms of budget, comfort, or planning; by that time it is looked upon simply as a work of art—good, bad, or indifferent.

Most of the buildings designed and constructed by Le Corbusier, Mies, and Wright have yet to complete their Life One existence. People still look at them in terms of how much they cost, how well they function, whether they are too hot or too cold—in short, whether the roof leaks or doesn't. To select these three men and call them the outstanding architects of their epoch is taking somewhat of a risk. Yet there is one measure that can be applied to gauge the greatness of an artist even during his lifetime: that is to ask how strongly he has influenced his contemporaries, how visible an imprint he has left upon his time.

The fact is that virtually no modern building constructed today would look the way it does if it had not been for the work of one or more of these three men. Lever House in Manhattan? The stilts are by Le Corbusier and the glass walls by Mies. The United Nations Headquarters? Inconceivable without Le Corbusier—even if he had not had a direct hand in their initial design. The General Motors Technical

Frank Lloyd Wright: Guggenheim Museum, New York City.



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Center near Detroit? Clearly an elaboration of Mies van der Rohe's work. The curvilinear, shell-formed structures going up all around us? Obviously a new interpretation of Frank Lloyd Wright's concepts of "plasticity" and "continuity"—i.e., the development of fluid spaces and fluid structures. The rambling, one-story house with deep roof overhangs and large areas of glass? This, too, is a by-product of Wright's work.

Le Corbusier, Mies, and Wright, in their very different personalities and cultural origins, represent among them the major traditions of the western world: Le Corbusier is the heir to the classic tradition of the Mediterranean; Mies likes to refer to the structural poetry of the Gothic tradition; and Wright was the eternal anarchist, the defender of absolute freedom, the heir to the ideal of the America of the Revolution.

What personal traits shaped these men and what their traditions and ideals did to shape their work goes far beyond architecture; for to them architecture was simply the language they used to express their ideals of a better world. All three, at one time or another, were touched by the political issues of the 20th century; but, somehow, these issues seem insignificant in the light of the broader vision that animated the work of these architects. The history of art is written by artists, not by "forces." There is no "force"—economic, sociological, technological—that could have created Le Corbusier's Ronchamp chapel, Mies's Barcelona Pavilion, or Wright's Taliesin West. And there would be no modern architecture as we know it without individual, creative acts of the sort represented by these great buildings.

The Future Shape of Architecture

The future of architecture, however, will be shaped not only by such individual feats, but also by certain facts to which even the most creative artist must respond. These facts have to do with technology, with political conditions, with population statistics, and with the realities of urban and suburban development.

The first fact—a fact of technology—is that the building frame made of straight steel or concrete members is going to continue in use because it is efficient, economical, and easy to put together. In short, the rectangular cage as refined by Mies—however limiting it may appear to those interested in a more sculptural expression—is sure to govern the shapes of most of our buildings for a great many years to come.

It is very likely that this rectangular cage will be sheathed with new materials that, in turn, will generate new patterns. For example, our preoccupation with the all-glass skin occasionally borders on the ludicrous. Some architects today are actually putting up buildings sheathed with three or four layers of curtains, the inside curtain being all glass, and the additional curtains being various complicated devices designed to keep out heat, glare, and Peeping Toms. Indeed, by the

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time the glass wall has been made workable, it may have had so many additional skins of material attached to it that its total thickness exceeds that of the walls of Jericho. The pure, pristine glass-sheathed building will probably be with us for a long time, and fortunately so. But technology had better find more satisfactory ways of making it work.

People and Cities

The next fact that will govern the shape of architecture for many years to come has to do with population statistics. The suburban sprawl surrounding most American and many European cities is rapidly demonstrating the folly of horizontal planning and building. A typical American suburb has a density of only four or five families per acre; Wright's plan for an "ideal" Broadacre City advocated something like one family per acre, closer to the density of a village than of a city. On the other hand, the densities in new vertical apartment projects in New York and elsewhere are around 400 to 500 families per acre, and rising.

Neither one of these extremes makes any sense. The suburban sprawl has so completely engulfed every American city that few city dwellers can ever get out into open, unadulterated countryside; and the crowding within our cities is so intense that life inside the metropolis often seems close to being snuffed out completely.

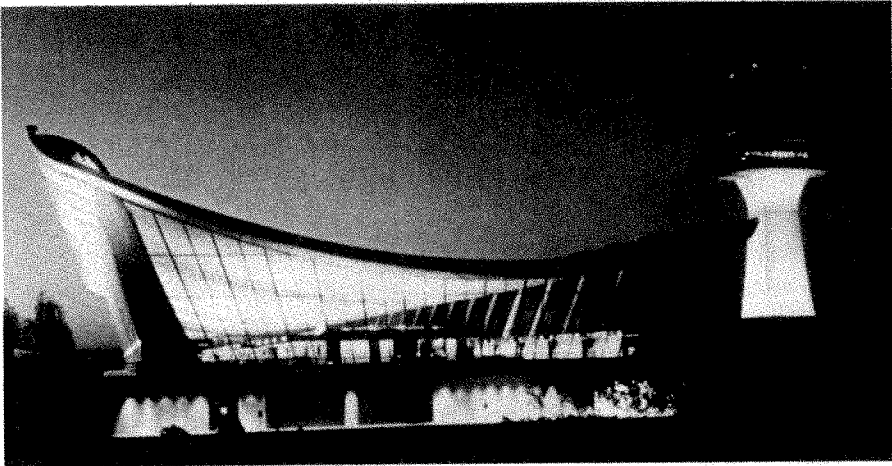
The only rational solutions in the light of these facts and experiences seem to be those advocated for the past forty years by Le Corbusier and others influenced by him. Urban densities of 400 families per acre are not, in themselves, inhuman, so long as the distribution of tall towers versus park areas is handled with imagination.

It is, of course, remotely possible that the sort of decentralized city advocated by Frank Lloyd Wright might prove efficient in parts of the United States—where there is still plenty of space—though it cannot possibly work in Europe. But this presupposes two conditions that are doubtful, to say the least: first, it assumes that people don't like to live in cities; and, second, it assumes that businesses and industries can operate efficiently when cut up into smaller units. Neither one of these assumptions seems to have any basis in past or present experiences. And when advocates of decentralization state, airily, that high-speed transport will overcome all difficulties by linking satellite towns to one another, they are ignoring the fact that many people like big cities not only because everything and everybody is within easy reach, but also because big cities hold a certain excitement that is intensely stimulating.

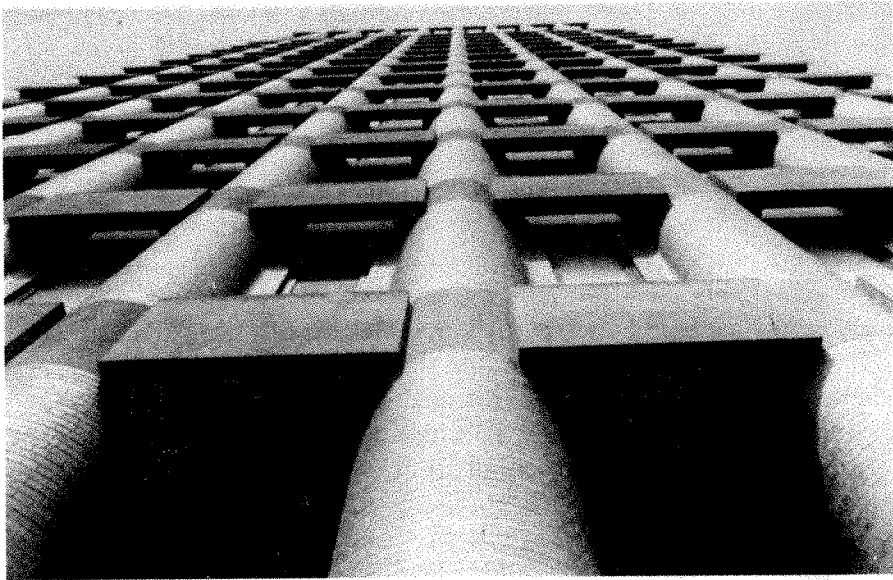
"Background" vs. "Foreground" Buildings

Does all this mean that the future belongs to Mies and Corbusier alone? Does it mean that tomorrow's ideal cities will be assemblies of rectangular glass, steel, and concrete slabs rising out of a park landscape?

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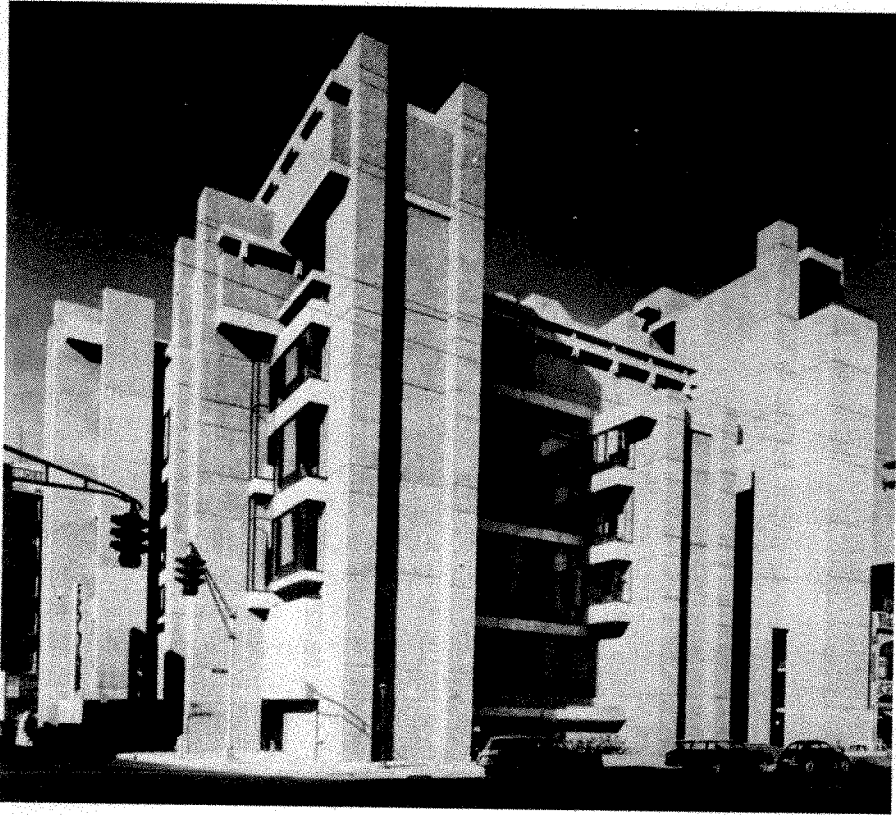
Three outstanding buildings by architects who have absorbed and individualized the styles of the "Master Builders." Above, *Eero Saarinen's* Dulles Airport, near Washington; below, *Philip Johnson's* Kline Biology Tower in New Haven, Connecticut; and right, *Paul Rudolph's* Art and Architecture Building at Yale University.



Does it mean that Wright's intense effort has come to nothing?

Of course not. What is likely to happen is something suggested by Paul Rudolph (who heads the department of architecture at Yale University in Connecticut) when he talks about the creation of "background" versus "foreground" buildings. Most of our multicellular structures — office buildings, factories, apartments, hospitals—are likely to remain "background" buildings, relatively anonymous, simple, and unaffected. These great structures will shape the spaces that, in turn, shape the city. They are like the neutral backdrops on a large stage.

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But within the spaces created by these “background” buildings, there will be many structures of an entirely different kind: buildings symbolizing some function of government, or some religious or communal aspirations; buildings requiring great, uninterrupted spans, like supermarkets and assembly halls; buildings for recreation and education. Many of these “foreground” buildings call for a structural system very different from Mies’s cage—a much more sculptural expression, in most cases. Le Corbusier understood this very well when he demonstrated, in his imaginative city plans for St. Dié in France and for Chandigarh in India, that certain symbolic buildings should be treated like huge pieces of sculpture—huge forms—carefully placed to contrast with their neutral backdrop.

And the “Search for Form,” as Eero Saarinen called it, is now under way. In this search, the curvilinear work of Wright should suggest exciting possibilities, and so should Le Corbusier’s excursions into plasticity. Both of these men always insisted, however, that the new forms were *significant* only if they acknowledged certain disciplines, especially the disciplines of advanced engineering. Yet, in America especially, these disciplines have lately been ignored to an alarming degree. In the name of symbolism, architects have created huge works of architectural sculpture that violate not only every known principle

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of engineering, but also every known functional requirement. The great Italian engineer, Pier Luigi Nervi, has pointed out that there seems to be an unnatural "interest in novelty and technical daring"; that the many new sculptural roof shapes supported on only two points are "a structural absurdity which calls for sleights-of-hand in building"; and that this sort of thing amounts to "the development of ideas from the outside in"—i.e., a violation of the principles of organic architecture as they evolved from the turn of the century to the present.

The Demand for Novelty

One of the real problems is the constant demand for novelty, particularly in the United States. Architects who do not come up with a new form every six months or so are considered "dead on their feet." Indeed, all artists, to a degree, are under the same sort of pressure—a pressure familiar enough in the area of consumer goods, where styling must satisfy the demands for new models at regular intervals to keep buyers buying and factories humming, but rarely before applied to the arts. One is reminded of some of the great works of the past—Ghilberti's doors in Florence, for example—which represented the work of a lifetime and changed the course of art decisively because they grew out of an *inner* conviction, an "organic" interplay between individual creative genius and the spirit of the time. By comparison, the brash, flamboyant forms presented today in the name of symbolism and greater plasticity seem to belong in the area of salesmanship and advertising, rather than architecture.

When the novelty begins to wear off, and the radical principles of engineering employed by Wright and Le Corbusier become better understood, the "foreground" buildings produced by new generations of architects will, undoubtedly, return to the fundamental disciplines of an "organic" architecture. Meanwhile, there remains one more problem: how to find architects modest enough to be content to design "background" buildings—the buildings perhaps most immediately in demand. The first decades of the modern movement had their heroes and the habit of hero worship has become deeply ingrained. Yet the time for heroes is coming to a close; the true hero of tomorrow's architecture will be the city itself, and all architecture, ultimately, will have to be subordinate to its demand.

Indeed, it is high time that the city again became the hero of architecture, as it has been in all great periods of the past. For some decades now the city has been the victim of irresponsible exhibitionists—"individualists"—each trying to out-scream the next. It is a fallacy to argue that this sort of bedlam is an expression of freedom. It is merely an expression of the license of the few to impose their vulgarity (or, at best, their precious egos) upon the defenseless many. A painting can exist in a vacuum—the creation of a solitary artist, to be seen and felt

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only by him. Most buildings cannot; they invariably impinge upon some segment of society, however small. Architecture is so powerful a medium, so potent a "persuader," that it will always be a force for something—a force for order, for chaos, or perhaps, simply for more dreary indifference.

To create a coherent civilization—and this is its purpose—architecture must again become a force for order. Some critics have asked whether there can be freedom in architectural order. Indeed there can be; in fact, there can be no freedom *without* order, *without* a rule of law. The three great architects who wrote so much of the story of modern architecture are its lawgivers; they created a set of physical and moral laws which architecture cannot afford to ignore. Even Wright, the freest spirit of the three, subscribed to as clear and rigid a code of architectural principles as the most disciplinarian architect of the Renaissance.

A New Synthesis

The next phase in the evolution of modern architecture would seem to be a sort of synthesis of all the concepts developed by Wright, Mies, and Le Corbusier. The three are not nearly as far apart as they once appeared to be. Le Corbusier's concept of an organic architecture may be much more intellectual than Wright's romantic notion of the same name; but given certain cultural and temperamental differences, the two ideals now appear remarkably close. And there was, of course, never any conflict at all between Mies and Le Corbusier.

The new generation of architects that will do most of the synthesizing is now hard at work; most of its members seem dominated by Mies and Le Corbusier—but only superficially so. In reality, the principles Wright brought into modern architecture are being rediscovered and reinterpreted—and modernized. Wright's sense of scale, his love of fine detail, his mastery of light and space (and the interplay of these two)—all this is beginning to intrigue the new synthesizers. But, above all, they are fascinated by the notion of continuous, plastic structures.

Although Wright never really built a structure that was as continuous and plastic as he knew structures could be, he recognized the fulfillment of his dream in the work of one or two younger engineers. Indeed, the only contemporary structures Wright was willing to praise in his last years were the plastic concrete umbrellas by the Spanish engineer Eduardo Torroja, and the hyperbolic paraboloids by the Argentine engineer-architect Eduardo Catalano. These two men, together with Mexico's Felix Candela, Italy's Pier Luigi Nervi, Germany's Frei Otto, and others, today exert a growing influence upon the younger generation of architects. Yet what they are teaching is really the lesson of Wright—modernized, rationalized, and made practical.

In the United States, architects like the late Eero Saarinen and the

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still active Philip Johnson and Paul Rudolph have synthesized Wright's work with that of Mies and Le Corbusier. Saarinen built "universal spaces" à la Mies, but put them under plastic structures of a kind imagined by Wright; Johnson is still interested in "poetic expression of structure" (again à la Mies), but the structure is becoming increasingly fluid and sculptural—a far cry from Mies's steel pilaster; and Rudolph is really most concerned with ways of establishing the scale of a building by intricacies of detail, of spatial organization, and of lighting.

These men—and one should add Minoru Yamasaki, who admires Mies but aims at a "richness which would make Mies frown"—are among the more important architects of the second generation. They are not innovators: it would be difficult to innovate after so overwhelming a flood of new ideas. They are the synthesizers, the men who are trying to find areas of agreement in the three very different idioms they have inherited from Mies, Le Corbusier, and Wright. Their most significant work is being done in the field of "foreground" buildings; in fact, they are probably too self-important (as all artists are bound to be) to limit themselves to the creation of "background" structures.

Disciplines of Structure and Function

The danger is that those who have chosen to concentrate upon "foreground" architecture may be too concerned with novelty for novelty's sake alone. Some of the more widely publicized "foreground" structures of the recent past suggest that this may be so; but the chances are that this new eclecticism will pass. The new generation of architects is beginning to return to the underlying disciplines of structure and function, all organically related as Le Corbusier and Wright tried to relate them. This represents no abdication on the part of the younger architects: after all, Michelangelo was perfectly willing to follow the example of Brunelleschi's dome in Florence when he designed that of St. Peter's.

If there are to be any new Michelangelos in our time, I believe they will have to accept the three propositions suggested above: first, that the fundamental principles of the new architecture were largely settled by its great lawgivers; second, that the time for individual heroes is past; and, third, that the hero of the future must be the city itself. Out of this acceptance may grow a new generation of great artists, all working within a universally understood discipline, all interpreting that discipline in new ways. The alternatives are architecture or Disneyland, civilization or chaos. "What makes our dreams so daring," Le Corbusier once said, "is that they can be realized."

MIES VAN DER ROHE AND THE SKYSCRAPER

By William H. Jordy



If Frank Lloyd Wright (who died in 1959) was the most influential pioneer in the design of the modern American home, Ludwig Mies van der Rohe (who died in 1969) probably had the greatest impact on the architecture of large 20th-century structures in the United States, his adopted country, and abroad. He was the recognized master of the so-called International Style—the unadorned, steel-framed, “glass box” that looms as visibly in Nairobi, Tokyo and Caracas as in Berlin and Chicago.

William H. Jordy is professor of fine arts at Brown University, where he teaches courses on modern architecture. He is the author of a four-volume work entitled *American Buildings and their Architects* and contributes regularly to architectural journals.

When one thinks about it, few cultural phenomena of the postwar years are more astonishing than the contribution of Ludwig Mies van der Rohe to the United States, or the American contribution to his genius.

In 1937, when he arrived in the United States to escape Nazi oppression, who would have expected that a deliberate and austere perfectionist would so spectacularly succeed in the bustling pragmatism of his new environment? Yet when Mies (as his compound surname is commonly abbreviated) reached the United States at the age of 50, he had only begun his career. His 30-years' practice in Europe had resulted in far more projects than realized buildings.

In his adopted country Mies not only built many times the number of buildings that he had realized in Europe, but his commissions were far larger and more prominent. Moreover, the work of a perfectionist who had appealed to a very restricted audience suddenly became so influential that the Miesian building, a skeletal network filled in with glass and panels of various sorts, transformed American cities during the 1950's. Overnight, it seemed, the heavy skyscraper silhouette of brick and stone at the heart of large American cities gave way to highly polished and veined metal and glass walls reflecting other highly polished metal and glass walls nearby. In the suburbs and countryside,

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a comparable style appeared in low, spreading shopping centers, schools and industrial complexes.

From the United States, the style spread throughout the world to become truly international. In this spread, inevitably, some buildings were good; most were mediocre. Some were appropriate for their locations; others were not. Whatever their quality or the appropriateness of their location, buildings with exposed skeletal walls extravagantly glazed came to be described (not always accurately) as “Miesian” or “American” in style. What, in fact, did Mies van der Rohe contribute to modern architecture from the time of his arrival in the United States? How did the American environment make this contribution possible? These are some of the questions suggested by Mies’s phenomenal American career.

When Mies arrived in the United States he went to Chicago, where he eventually headed the architectural school at the Illinois Institute of Technology. His fellow refugee from Nazism, Walter Gropius, went to Harvard University at about the same time. In downtown Chicago, Mies saw for himself the world’s first completely developed skyscrapers, which had been built in the 1880’s and 1890’s. In the boldest of these buildings, the skyscraper is stripped to its essence. And in its essence the skyscraper is a tall elevator building completely supported by its skeletal framing. (It should be remarked that these early skyscrapers were modest in height, rarely over 14 stories high, when compared to the 40 or more stories of the mid-20th century towers, such as New York’s Empire State Building.) The generous rectangular intervals created by the supporting frame can be almost completely filled with glass if the architect chooses—and the boldest architects working in Chicago in the 1880’s and 1890’s did so choose, in order to coax as much light as possible into the densely packed office buildings.

These early skyscrapers inevitably appealed to Mies, who has characterized his architectural ideal as “almost nothing.” In coming to Chicago, Mies happened upon the one city in the world which offered so thorough a demonstration of his philosophy of “almost nothing” in buildings so explicitly modern.

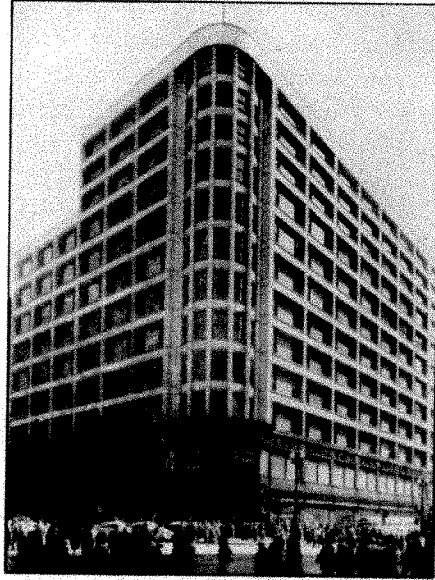


Ludwig Mies van der Rohe: "I don't want to be interesting, I want to be good."

Mies van der Rohe and the Skyscraper

The Prefabricated Frame

It is not that the Miesian skeletal building might have gone unrealized had Mies happened to settle in another American city. But the “bare bones” quality of early Chicago skyscrapers made him instantly aware that the prefabricated metal skeleton was the essence of technologically advanced building in the United States. Some countries possess a tradition of masonry building and the solid wall predominates; other countries, like the United States, possess a tradition of wood and metal building and emphasize the skeletal frame. The American frame, whether of wood or metal, tends to be comprised of highly standardized parts substantially prefabricated in the factory, so as to insure rapid assembly by construction workers. Hence, in viewing the “almost nothing” of the early Chicago skyscraper, Mies happened upon a spectacular demonstration of one of the bases of American construction.



Louis Sullivan, department store, Chicago (1900). Early example of U.S. skyscraper style.

Almost nothing: by this motto Mies meant that sound architecture emerges so intimately from its structure as to seem its inevitable consequence. But Mies’s “almost nothing” is a trap for the simple-minded. His deprecating phrase conceals the number of esthetic decisions which his spare architecture calls forth. We have only to look closely at the early Chicago skyscrapers in order to observe the crudity of most of them. Frames and windows are often ill-proportioned. The terra cotta sheathing is often clumsy in both its profile and its surface ornamentation. The juncture of one member or one material with another is often awkward. There are, to be sure, great buildings among these early Chicago skyscrapers—especially Louis Sullivan’s Carson-Pirie-Scott Department Store built around 1900, which is among the masterpieces of the pioneer phase of modern architecture. The majority, however, are boldly, vitally, courageously gawky.

“Less Is More”

With Mies, the pragmatic “almost nothing” became the self-conscious starting point for an architectural esthetic. He extended his “almost nothing” with his more famous aphorism: “less is more.” In reducing the building to its essence, he believed that the designer can

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concentrate on perfecting this essence, until naked construction becomes architecture. Less becomes more in that the building is objectively experienced as an intensely beautiful "thing in itself," without the interference of any literary, symbolic or sentimental recollections, and so inevitable as seemingly to transcend the uniqueness of the designer's personality. "I don't want to be interesting," Mies said. "I want to be good." It is precisely because Mies sought to universalize the building experience of Frank Lloyd Wright or Le Corbusier, that he became the great grammarian of modern architecture. Like all grammarians, Mies was concerned with basic language and the manner in which language correctly and elegantly goes together.

Correctness *and* elegance: Mies made the linearism of the steel frame the visual as well as the structural basis for his architecture. Hence his architecture consists in bringing the frame to the surface of the wall; in proportioning the frame to both the rectangular window intervals and the rectangular building mass; and, finally, in detailing the frame itself from prefabricated parts so that what had been raw becomes beautiful. Each aspect of what at first sight seems a simple problem is fraught with the kind of perplexity for which only a genius with Mies's temperament for patient refinement could find the most compelling solution.

If, in this process of laying bare and refining, Mies made construction beautiful, he also made it *symbolic*. To take a specific example: since the actual supporting steel frame of multi-story buildings must be sheathed in a fireproof material, much as the frame of the early skyscrapers had been clad in terra cotta, this structural skeleton is lost to view. Mies made it visual by attaching purely symbolic flat steel sections outside of the fireproofing. He often intensified the symbolism by welding a projecting outrigging of I-beams to the exterior wall which rise from the bottom of the building to its cornice.

Shapes of Steel

The I-beam—so-called because its cross section resembles the Roman letter "I"—is, of all steel sections, the most familiar shape in skeletal framing. This detail of the projecting I's, like all of Mies's detailing, serves in three ways: functionally (or structurally), visually, and symbolically.

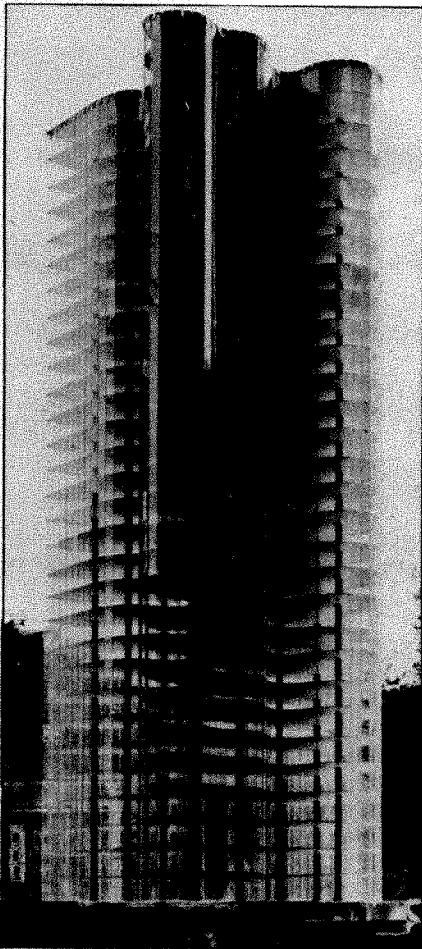
Functionally, the I-beams rising vertically outside the edges of the horizontal floor slabs provide enframing for the windows. Visually, they provide a slightly sculptural element for the otherwise flattish elevations, while animating the wall by seeming to open and close, like louvers, as we move past them. Visually, too, they provide architectural scale, since these rails running the full height of the wall transcend the individual window units, thereby making the building something more than a pile of tiny rectangles. Symbolically, the I-beams,

Mies van der Rohe and the Skyscraper

as the basic shape for skeletal framing, create a modern equivalent for the classical pilasters affixed to Renaissance buildings.

The Influence of Mies

Moreover, by designing his buildings in terms of the pieces which comprise them, and then refining these pieces for eventual assembly, Mies exerted a profound effect on architectural prefabrication. Herein, to a large extent, lies his immense American, and later worldwide, success.



Mies: plan for glass skyscraper (1921).

He taught that architecture may emerge from the discriminating design and use of the prefabricated part produced by the most advanced technology. As a grammarian, Mies expected his language to be used by others. Indeed, the widespread use of his ideas has validated its universal quality. Inevitably, the achievements of his disciples and imitators have ranged the gamut of quality from superb to awful. But this is the fate of any common language.

Mies's language must be judged, first, by looking at those buildings which are closest to Mies in that they both frankly resemble his work and partake in some measure of its quality. Thus, to mention only the familiar vanguard, there is Eero Saarinen's General Motors Technical Center. There are the best of the business buildings by the sizeable firm of Skidmore, Owings and Merrill, as inspired by the leadership of the chief designer in the New York office, Gordon Bunshaft. There are the suburban houses of Philip Johnson, Mies's closest disciple,

who wrote the first book on his mentor and collaborated with him on the renowned Seagram Building in New York.

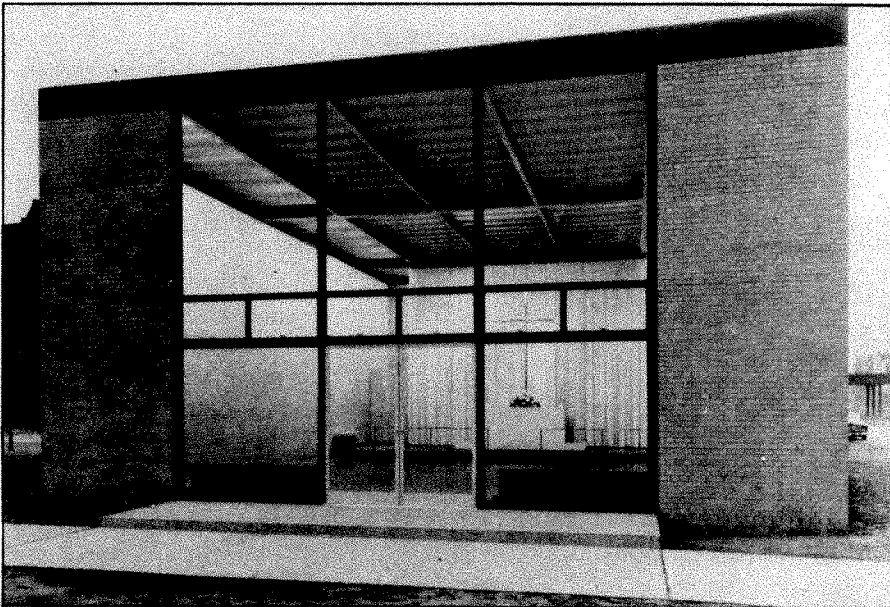
In both extending and popularizing Miesian ideas, the buildings of these architects have been quite as influential as Mies's own work in spreading his gospel. But a common language has also to be judged by the results produced by those less competent, and even perhaps by those positively incompetent.

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At its lowest common denominator, the Miesian esthetic is reduced to the routine repetition of lines and panels, extended horizontally or heaped vertically until the grid either meets the client's needs or exhausts his pocketbook. Where Mies and his most influential disciples design a *building*, low-level "Miesians" (so called) more or less blindly lift a *system* from manufacturers' catalogues. The subtlety of Mies's proportions and scale disappears. So does the refinement of his profiling of components. His restraint is customarily replaced by billboard gaud and glitter. Vulgar as these routine buildings are, however, Miesian language at least gives them a degree of discipline, precision and relevance to modern technological processes.

Too Abstract?

If Miesian language possesses the virtue of discipline, is intensity of discipline purchased at the expense of a wide range of expressiveness? Some say it is, and on two grounds. First, there are those who protest Mies's continuous use of rectangular massing in his American work, asserting that he failed to express the function of his buildings in any significant manner. The same boxy container serves as a house, a classroom, a theater, a chapel. Then, there are those who condemn the



Chapel, Illinois Institute of Technology.

rationalistic severity of Mies' esthetic for too drastically limiting the emotional range of his buildings—so much so that the experience provided by one of them is identical for all. The first criticism holds that Mies's architecture is too abstract; the second that it is too austere. How justified are these complaints?

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Ever since his arrival in the United States, Mies had been so intent on developing an esthetic for the building envelope that he generally slighted the space which it enveloped. His exteriors record interior space only insofar as the interior space is one large room equivalent to the box enclosing it, or insofar as the gridded frame suggests the possibility of compartmentalizing the space inside into repetitive cubicles. The interior spaces of these ideal enclosures are functional. They are so in the negative sense that a regularly framed space can, like a warehouse, contain almost anything.

But if the raw space of these neutral containers is somehow inadequate for its function, elaborate mechanical equipment compensates for the deficiencies of the ideal building. Such equipment has proliferated since World War II in the United States as in no other country. Air conditioning corrects excessive heat or cold occasioned by large areas of glass. Tinted panes counteract glare. Luminous ceilings dispel shadow at the centers of very deep buildings. But there are those who ask whether the architect should relegate so much of his traditional concern for the expression of function to machinery buried in the innards of his building. And many architects feel it imperative to reassert their ancient prerogative of molding beautiful spaces around specific activities.

Austerity vs. Decoration

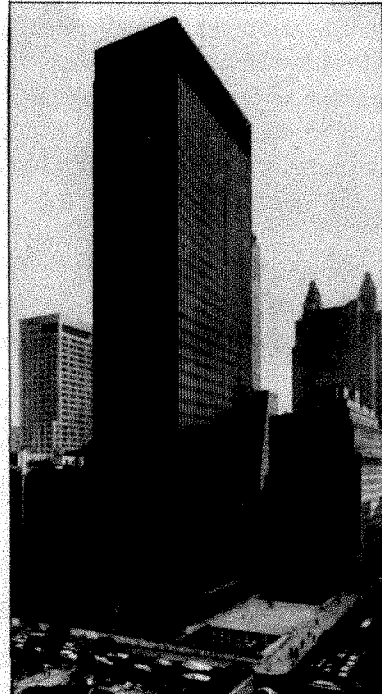
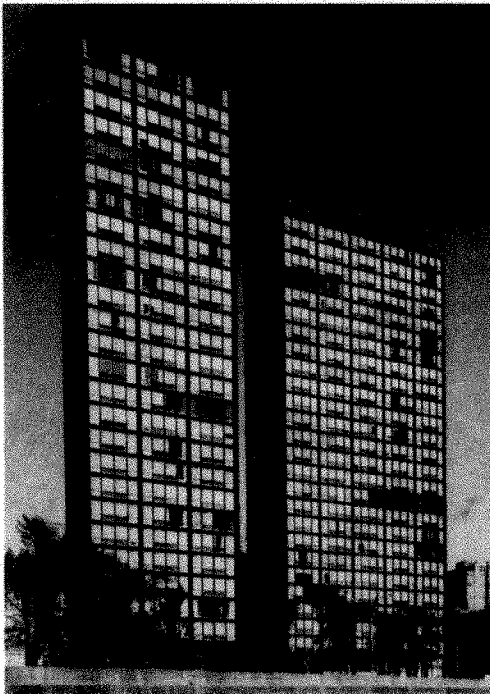
So much for criticisms of Mies's abstractness. What about his austerity? Some architects are enriching the Miesian esthetic by making it more decorative. By screening and ornamenting his structure in various ways, they banish its austerity. Some are exploring more dramatic kinds of structure: vaults, domes, curved and folded forms instead of Mies's reticulated skeleton. Still others are extending his classicistic approach to the building with rather literal images of classical porticoes, cellas and entablatures, thus re-invoking the Beaux Arts classicistic image from which modern architecture once revolted. That such elaboration of Miesian themes is immensely expanding the design potential available to the modern architect is undeniable. It is equally true that much of this elaboration of Mies represents the superficial appeal of easily understood surface effects, and is therefore less profound than extensions of his esthetic based on the simple yet subtle expression of space and equipment.

Before welcoming this diversely enriched Miesian esthetic, therefore, should we not ask whether the range of experience provided by his buildings is not somewhat wider than it might at first appear? Admittedly, Mies sought experience through exclusion rather than abundance. In his emphasis on deliberation and discrimination, he focused exclusively on the idealizing art of rationalization, and did so within such rigorous limits as always to suggest that he created the same building over and over, just as Piet Mondrian's canvases always suggest

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the same picture. But the fact that Mies usually made something new out of what appears to be a universal prototype is precisely the dramatic element in what is carefully calculated as an undramatic creation. We can find a parallel in the Greek Temple of Poseidon at Paestum, which becomes the Parthenon in Athens. These two temples are the same temple, and yet the ruggedness of the one against the litheness of the other results in two completely different experiences. Just so, with Mies's architecture. His Lake Shore Apartments in Chicago and the Seagram Building are exactly the same building creating different experiences.

Relative to one another, the Paestum-like severity of Lake Shore contrasts with the Parthenaic refinement of the Seagram. In the Lake Shore Apartments, vertical blocks are set at right angles to one another across a narrow interval of space in such a manner that their static



Lake Shore Apartments in Chicago (left) and Seagram Building in New York—"the same building creating different experiences."

shapes are always in tension with one another. As we circle the complex, we find that it possesses neither a true "front" nor a true "back." We always see the narrow side of one block against the broad side of the other in a constantly changing relationship.

The Seagram Building, on the other hand, reconciles the Lake Shore paradox of static elements in perpetual disequilibrium. The bronze building rises like a dense, dark cliff behind the absolute void of its

Mies van der Rohe and the Skyscraper

entrance plaza. The axis of the plaza culminates in the formal grandeur of the entrance with its two-story stilts each backed by the pylons of the elevator shafts. Where, in the window grid of the Lake Shore Apartments, horizontals constantly challenge the verticals, this tension too is reconciled in the Seagram by the clear affirmation of verticality. In the Lake Shore, then, a perpetual tension; in the Seagram, the reconciliation of tension in climax.

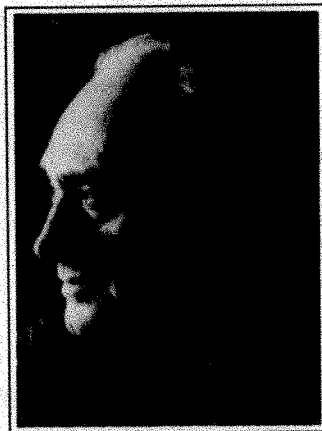
Thus Mies's neoclassicism was only partly apprehended in the manner in which he conceived his architectural vocabulary. He was also profoundly neoclassical in the way in which he squeezed different kinds of experience from his universal image. If his emotional range was narrow, it was its very narrowness which made his point. He did not turn somersaults to create new experience. A change of material, a shift of proportions, an adjustment in profile, a realignment of his simple masses and—with "almost nothing!"—what was becomes something new, while yet remaining essentially the same.

How much with how little! The steel I-beam from the rolling mill becomes a structural, visual and symbolic entity for the creation of beautiful buildings. The same building becomes a different building. If so many architects today owe so much to Mies even in rebelling against him, it is because his "almost nothing" contains, paradoxically, the fertile possibilities inherent in an elemental model.

A QUEST FOR EMOTION

By Morris Lapidus

Best known as the designer of opulent, flamboyant hotels, like the Fontainebleau in Miami Beach and the Summit in New York, Morris Lapidus has rejected what he calls the "cold, clinical, unadorned" architecture of Mies van der Rohe and the International Style. In this statement of his philosophy of building, reprinted from *AIA Journal* (published by the American Institute of Architects), he argues for the element of "delight" to be achieved by the adornment of structures.



I have long felt that somewhere we missed the mainstream of architectural design and strayed off instead into a shallow tributary, which certainly must run dry. I feel that it is necessary for us to re-examine our architectural heritage, in order to draw from the classics of our tradition. In this way, I feel we can eventually find our way back into the mainstream. Otherwise it seems to me that we will flounder and go down under our burden of rectilinear, geometrical design, the heritage of our half-century search for new forms to express the world we live in.

I have felt that contemporary architecture, in the forms in which it matured during the 1940's and the 1950's, was unacceptable to the lay public, although it was warmly received by the initiates. I have felt that our modern architecture left the layman cold, that the average man felt no visual emotional impact when he looked at, lived and worked in the architecture of his day. I am glad to say that recently I have observed a definite change, a swing toward what has been called "the new sensualism," toward motion and emotion in architecture.

When I speak of visual emotional impact in architecture, I am taking for granted the fact that all good architecture must contain the basic concept of structure, modified by the many improvements added over the years in structural systems, materials and mechanical equipment. Planning, the true basis of all architecture, has undergone radical

* by The American Institute of Architects.

changes from the day of the classic plan. But structure and planning, the bedrock of our profession, are not what the public sees. Today we can assume that the architect will create the soundest structure and devise the most efficient plan. What I wish to talk about solely is appearance—in short, the visual impact a building has on people who see it and use it.

At the outset, let me make it clear that I am by no means a classicist, seeking to return to the classic form of architecture, even though classicism comprised my entire education some 40 or more years ago. Modern, or contemporary, architecture is something I acquired, as my colleagues did; our training was in pure classic and Renaissance architecture. Although at first I could not help but be attracted by the fresh, clean simplicity of the Bauhaus and Mies, the years brought gradual disenchantment and, finally, rejection on my part.

Recently, however, I have come to realize the importance of study and appreciation of the works of Walter Gropius, Le Corbusier and Mies van der Rohe, as a result of following my son's studies in architecture. At the outset, I admittedly regarded as a complete waste of time his instructors' insistence on adoption of the Miesean approach to all his work. But I soon recognized that this approach is fundamentally sound to the aspiring architect, as it gives him a background of rigid discipline, from which he can find a point of departure into the newer architecture evolving today. I feel that a thorough grounding in, and love of, architectural epochs of the past—together with the discipline learned from Miesian architecture—provides an excellent springboard into the future.

Human and Animal Nature

But this is not what I wish to discuss here. I have spent five soul-searching years seeking the answer to why I designed certain buildings in the past ten years, hoping at the same time to find some clue or directional arrow leading to the future. My quest led me to study sociology, psychology—even anthropology. Somewhere, I felt, there must be the elusive answer that would be a clue to the architecture which would satisfy the architect himself, the critics and, ultimately, the public—in short, the architecture acceptable to everyone. And more, this architecture would not only be acceptable, it would also be emotionally exciting to all who looked at it. I repeat, my quest was not for new structural or planning forms, admittedly the most important factors, but for that element which Vitruvius and, later, Sir Henry Wotton called “delight”—or the emotional impact of architecture on man.

Delving into psychology, I went back to the earliest primitive emotions. But I did not find my answer there. I next ventured into the field of anthropology, asking this question: “What were the earliest

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emotions or acts which distinguished man from beast? When was the exact moment that the beast ceased to exist and primitive man was born?"

Re-examination of human emotions brought some interesting conclusions. As an architect, I naturally reasoned that man was born at the moment he began to build his first shelter or home. This, I soon discovered, was wrong. The beaver too builds homes. He also builds dams which are marvels of engineering dexterity, considering his primitive tools—his teeth and paws. The nest of a bird also shows a remarkable ability for construction. When we examine the beehive we find another marvelous edifice. And if we compare the size of the bee to that of man, we can fully appreciate what a remarkable example of planning, structure and comfort the hive is.

Finally we come to the world of ants. Here we stand in true awe of the planning, structural dexterity and brilliant, over-all concept of the anthill. When we consider the minute size and equipment of an ant in relation to man's, we're forced to conclude that the ant is a far more ingenious and daring builder than man has yet proven to be.

These few examples indicate that the factor distinguishing beast from man does not lie in an ability to build a shelter or home. Nor did I find the answer in the realm of love. Here too I discovered several remarkable examples in the animal kingdom. Among certain animals, the mother instinct is so strong that it surpasses anything to be found in the human race. As for the love of one mate for another, there are examples in the animal world to teach man unforgettable lessons in devotion and compatibility. Even the herd instinct in animals sometimes goes beyond the clan instinct of early man.

So my quest continued and I was able to make many similar revealing discoveries about human and animal nature until, at long last, I found what I believe is the definitive answer to my question.

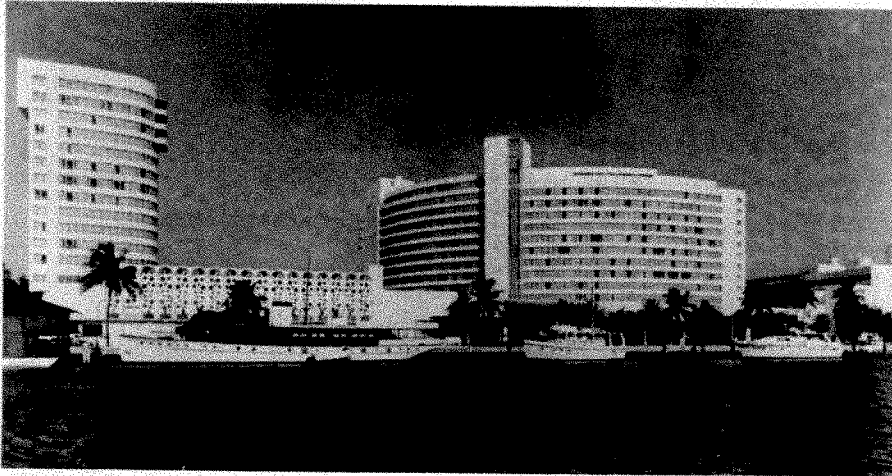
The Need For Adornment

The answer came slowly, but it has survived every test and seems to offer the most illuminating and satisfactory solution to my problems. It also supports the argument on behalf of visual emotional acceptance, not only in architecture but in all art forms. My long-sought answer can be simply stated: *There isn't a single example in the animal kingdom where an animal adorns itself or its abode.* When the first creature looked at itself and decided it needed some form of adornment, *purely for the sake of adornment*, and when that adornment was created by him, this was no longer an animal, this was a man. When the first cave dweller scratched and colored the walls of his cave, whether for religious or artistic reasons, he was truly a man, not a beast.

This, then, I believe is the most elementary human emotion: the desire, the love, the need for adornment. And if this primitive emotion is indeed the first requisite of a human being, the basic emotion (which

A Quest for Emotion

I am positive can never be excised) must be satisfied, in order to inspire visual emotional acceptance of everything we create. This, then, is my theory, my basic belief as to what architecture must fulfill, whether we speak of the earliest architecture of Assyria or the modern architecture of today.



Morris Lapidus: Fontainebleau Hotel—"Architecture must satisfy man's need for adornment."

Let us test this theory, not only as it applies to architecture but to other fields, too. In the history of book publishing, for example, we find that even the earliest manuscripts were illuminated, decorated, or in some way embellished. Today it is a rare book that is published and sold without some form of dust jacket. Before the introduction of jackets, book bindings were carefully designed and beautifully ornamented. Nowadays almost as much thought seems to go into the design of the jacket as into the author's writing. Apparently it's as necessary to the sale of the book as is the author's name. Ridiculous as it may seem, publishers have discovered this basic truth—an attractive jacket helps sell the book.

Another example is to be found in the field of phonograph records. People love music and annually buy millions of dollars worth of records. Certainly a Brahms concerto should sell well even in a simple manila envelope. But does the manufacturer offer Brahms in a simple manila envelope? The answer is obvious—of course not. Quite the contrary—the finest artistry and care goes into the design of the envelope into which the record is slipped. And although not a single note of the immortal music has been changed, it is a fact that more Brahms records will be sold if they are packaged in an attractive album cover. Record manufacturers know this from experience—just as do music makers and all of us who are beginning to understand that we can gain visual acceptance if we appeal to what I have labeled our basic human emotion—the love of adornment.

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And now let us return to architecture. Let us re-examine those great classic periods which mark the zenith of each epoch in the history of architecture. We will begin with the earliest—Assyrian architecture. Here was a great architecture of brick and post and lintel. The Assyrians were certainly expert brick makers—but were they satisfied with the simple functional brick? By no means. Their walls, brick by brick, form beautiful facades, ornaments in dimension and color. To-day, the Assyrians stand as giants in the history of architecture—artisans who learned to take common brick, mold it, glaze it and create masterpieces with it. In the same way, they used the simple wooden post, carved it, colored it, adorned it until the post itself became something beautiful and emotionally appealing.

From Colored Stone to Gothic Arch

We can apply the same test to Egyptian architecture, an architecture of stone. Were the Egyptians satisfied with simple, smooth, well-cut, well-fitted stones? Of course not. Their stones were carved and colored until they created columns of unsurpassed beauty and walls of infinite richness.

Here are two earliest known schools of architecture which prove that, once mastery of structure and plan had been achieved, love of adornment was a most vital element in its creation and survival.

Jumping ahead to the architecture of Greece, we find an architecture of post and lintel. The post soon became one of the most beautiful art forms in man's history—consider the delicate loveliness of the Doric column, the exquisite richness of the Ionic column. One cannot sit on the Acropolis without experiencing the strongest compulsion to run a finger over the delicate, beautiful tracery decorating many of the column bases found there. The fluting of a column represents the highest degree of artistry. Finally, the cap of a column is the sublime expression of a sculptor's genius. The same is true of the cornice and the architrave, the frame around the door—what beauty, what loveliness! This is pure adornment, soul-satisfying adornment that man has craved down through the ages, from the moment the first creature stopped being an animal and became a human being.

The Romans made great strides forward in structure. Their arches, their domes, are phenomenal tributes to the ingenuity of the human mind. But was the Roman architect satisfied with the wonderful forms he devised? The answer, again, is obvious. He was not. As proof, one need only look at Roman architecture. See its embellishment, its enrichment, its beauty of form adorned to the point where the heart of man still sings out today in praise of its great ruins. Again, form and plan alone were not enough. Not until enrichment, adornment was achieved did the architect of that epoch feel he had created the most beautiful structure possible.

So it goes through the ages. Each epoch had to find its own special form of adornment. In the Gothic style, the arch, the abutments, soaring wonders of engineering accomplishment, are certainly examples of marvelous structure and planning. Yet no Gothic architect was satisfied with just these two elements. Not until he had introduced the traceries, the leaded glass, the rich carvings, did he feel the design was a faithful expression of his intentions. In short, not until enrichment and adornment found their way into the structures was the architecture truly complete.

The Clinical Style

Once more let us examine modern architecture. There is no denying it has left the ordinary man completely cold. True, our architects defend this cold, clinical unadorned architecture as a way of life. Mies van der Rohe says in effect—Never mind what the man on the street thinks; you, the architect, must think for him. I do not agree.

I maintain that no architecture has ever been accepted, nor will it ever be accepted, unless it satisfies that early, ineradicable, primitive emotional craving for enrichment and adornment. Mies van der Rohe cannot change human nature. No architect will ever be able to root out that primitive emotion, the first love of adornment. And further-

Antonio Gaudi: Casa Mila—"flamboyant, exuberant structures."



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more, unless and until we can accept it and satisfy it, we—as architects—will never produce a true architecture of our epoch.

Now I have come to the end of my quest—and perhaps to the beginning of something new in architecture. Where this beginning will lead, or who will be in the vanguard as we approach the zenith of our own architectural epoch, it is still too early to say. I am merely one architect, trying to imbue my work with a certain quality that will make our architecture visually and emotionally exciting to the man on the street. Other architects, knowingly and unknowingly, are seeking this same visual acceptance. I do not know what form that love of adornment and enrichment will take—whether it will be finally exemplified by folded roof plates, or hyperbolic paraboloid domes, or Minoru Yamasaki's neo-Gothic arches.

Unless We Adorn

Of one thing I am certain; we must accept the basic fact that until and unless we adorn and enrich our 20th-century architecture, we will never reach our goal.

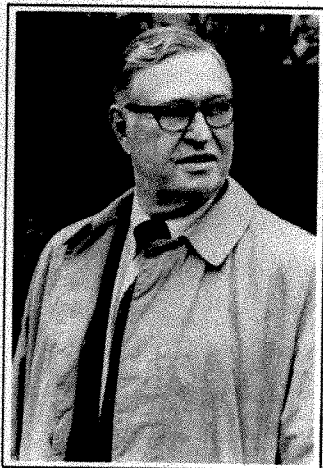
Whether or not you accept Frank Lloyd Wright as a genius, he was quite singleminded in one respect, namely: Despite his many innovations in plan and structure, he never lost sight of the fact that his buildings needed adornment. His early works attest to this. It was only later that some of his work began to lose that quality—and its lack is keenly felt today in the Guggenheim Museum in New York. Had he adhered to his earlier love of adornment when designing the Guggenheim, perhaps the structure would not be as controversial as it now is.

In my lifetime I have seen this early primitive love of adornment crop up unexpectedly several times, in the least likely circumstances and in defiance of all logic. For example, some years ago our architectural press suddenly rediscovered Antonio Gaudi, the genius of Barcelona. Certainly Gaudi's style has nothing of the clean concept of Gropius or Mies van der Rohe, both at that time at the height of their careers. On the contrary, Gaudi is flamboyant, exuberant, his love of adornment so apparent that even a child can feel the exciting enrichment of his structures.

It seems we are all simultaneously beginning to discover that enrichment and adornment will provide the only path to the final phases of our architecture today. Let us not be ashamed of these basic and primitive human emotions. Let us accept them, let us learn to understand them, love and embody them in our structures. Then will we be able to achieve not, as some have said, the end of an epoch, but the beginning of a true 20th-century architecture.

FRANK LLOYD WRIGHT AND THE AMERICAN HOME

By Frederick Gutheim



In contrast to the businesslike style of today's architectural corporations, Frank Lloyd Wright stands as a symbol of the individualistic artist committed to his own vision. Wright's greatest achievement, according to Mr. Gutheim, was the transformation of the single-family American home into a low-lying structure that is both elegant and informal.

A veteran city planner, Frederick Gutheim is currently principal consultant to the preparatory planning group of "Habitat 76," the upcoming United Nations Conference on Human Settlements. He is the editor of *Frank Lloyd Wright on Architecture* and the author of a biography of Alvar Aalto, the Finnish architect. He is now working on a book about the U.S. capital to be called *Washington, The Planned City*.

When America's greatest architect, Frank Lloyd Wright, died in 1959 just short of his 90th year, his career had spanned nearly three-quarters of a century, and his fame had become world-wide. Commentators went back to Da Vinci and Michelangelo to find a comparison. Bruno Zevi, the Italian editor of the magazine *L'Architettura*, summed it up in the question, "Can you imagine architecture without Frank Lloyd Wright?"

The question was especially appropriate to the United States, where, in the waning vogue for architectural purism expressed in the buildings of Mies van der Rohe, young architects were already turning back to the "organic" architecture Wright had made his own. It was always an architecture of structure, although he never denied the influence of the site and the importance of function. The long career of this Wisconsin architect, first trained as an engineer and then hypnotized into architecture by Louis Sullivan—America's leading exponent of the romantic movement called Art Nouveau, as well as a notable designer of commercial buildings—is marked by a series of structural systems, on each of which the architect rang countless variations in the 700 buildings which he designed.

The creation of the 20th-century American house was Wright's ultimate accomplishment. This one-story, low-lying, rambling, informal

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structure was first announced as “the prairie style”—an indigenous architecture for the immense river meadows of the Mississippi Valley. The large horizontal glass windows, the wide porches and balconies broke down much of the traditional separation between indoors and outdoors; and Wright’s open floor plan, which brought the various rooms of the house together in an uninterrupted flowing movement, was a distinctive American creation, now widely copied in all areas of the United States and also, increasingly, abroad.

The Wright house constituted a revolution in the American way of life. The architect was well aware of what he was doing; he stated his credo in a lecture delivered in 1902: “An American home will be the product of its own time, spiritually, as well as physically. And it will be respected the world over, because of its integrity; its real worth is as a great work of art.” Time proved him right.

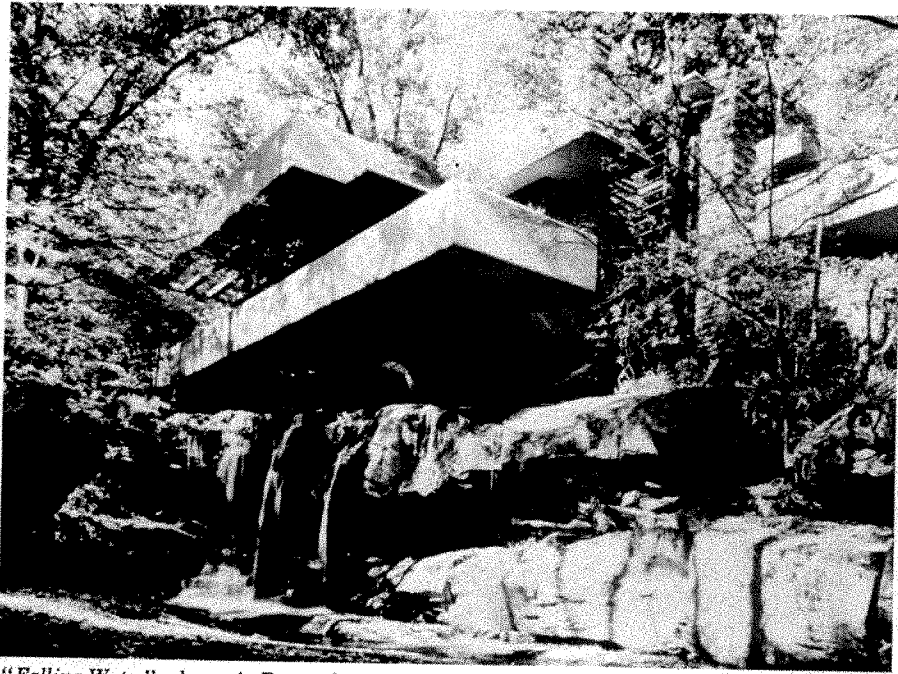
Houses for Easy Living

As it first came from his drawing board about 1900, and reached its culmination in the Robie (1909) and Coonley (1912) houses, this “Prairie House” was characterized by a low silhouette with projecting, hovering eaves, accenting the horizontal lines of the Chicago suburban landscape where most of Wright’s early houses were erected. The materials were stained wood, brick, natural sand plaster and stucco, and glass—massed in large banks of windows. The general character of the exterior of these houses was shadowy, sheltered, strongly unified

Frank Lloyd Wright with students at Taliesin, his home-studio-school in Wisconsin.



Frank Lloyd Wright and the American Home



"Falling Water"—house in Pennsylvania is dramatically cantilevered over a natural waterfall.

in design, informal, and immensely "livable." Their interior organization was clear, logical, and expressive of the new way of easy living. It was a striking contrast to the inheritance of the 19th century with its almost feudal hierarchy, its stuffy formality, its stultifying and empty discipline.

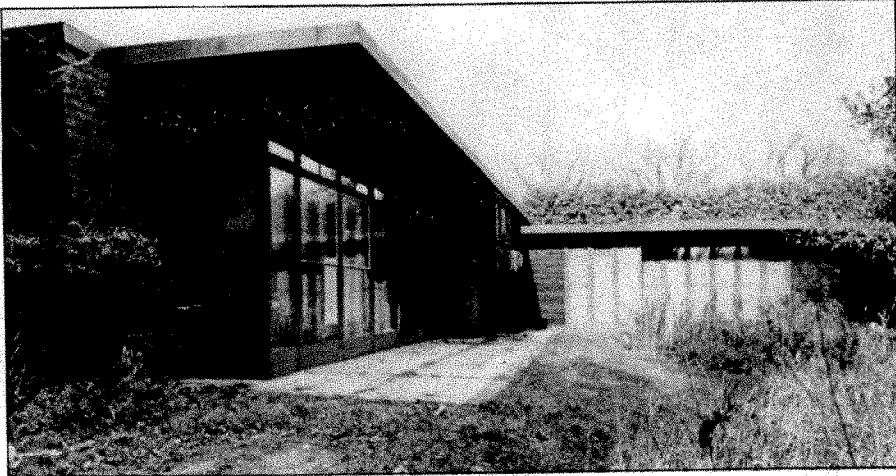
Wright's most pronounced characteristic was the continuous flow of space—the "open plan" which exerted such a decisive influence upon European architects two decades later, including such very different architects as Mies and Le Corbusier along with avowed disciples like William Dudok of the Netherlands. But in his development of the open plan Wright never forgot what some of his imitators overlooked, the need for privacy and seclusion as well.

After the prairie houses came the period of concrete block houses—equally integral structures—exemplified by the Millard, Ennis, and Barnsdall houses. Luxurious dwellings all, they were located in southern California where Wright practiced briefly following his return from Japan and the triumph of his Imperial Hotel, which was one of the few large buildings to survive the Tokyo earthquake of 1923. To the end of Wright's life houses remained the predominant type of building in his architectural practice. There was never a time when, busy as he might be with larger works, some hopeful and responsive client could not arrive at the architect's studio and command his interest in the design of a dwelling. Thus it will be possible for the architectural historian to trace the successive structural systems, in the design and

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execution of which Wright's career may best be understood, in terms of a single building type—the house.

Not for his great mansions alone should Wright be remembered. He took pride in the numerous small and low-priced houses which he built for those of moderate income. The Herbert Jacobs house (1937)



The Herbert Jacobs House—first of Wright's low-priced homes, since widely emulated.

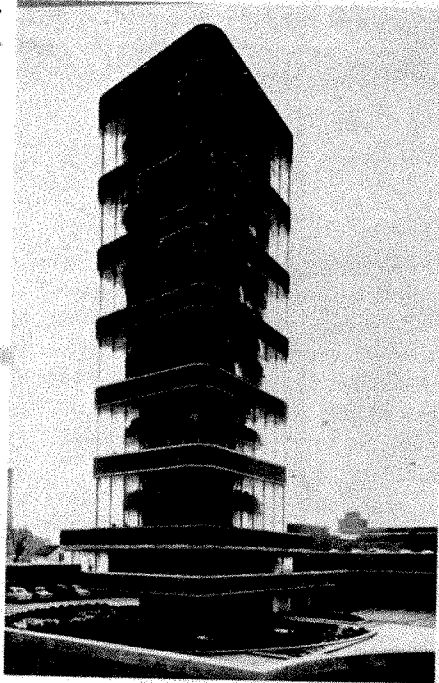
near Madison, Wisconsin, initiated a series of modest one-story homes. But Wright's rising fame brought him commissions for larger and more expensive buildings. In these larger opportunities we can see Wright faithful to his principles, whatever the type or the cost of his buildings. He gave integrity to the monumental structure, even as he endowed with luxury the smallest house. He always began with an idea of the purpose he wanted the building to serve. He might want a house to seem sheltering, or a concrete structure to appear light and spacious. Then beyond such poetic aims, Wright was interested in exploring the properties and possibilities of new and old building materials.

The Liberation of Space

In the Imperial Hotel and in the Midway Gardens, an open-air restaurant built in Chicago in 1914, Wright displayed his unmatched gifts of spatial magnificence and decorative splendor, as well as his strong talents as a functional planner. These qualities were increasingly brought into harmony with each other. They are admirably in focus in the two buildings designed for the Johnson Wax Company: the administration headquarters and the research tower, in which the dramatic qualities of architecture derive from one's apprehension of the structure. The structure is brick inside as well as out. But the brick is only a screen for the structure, as we are clearly shown by the glass panels which enclose the angle between the wall and the ceiling.

Frank Lloyd Wright and the American Home

This was the same trick the architect had used much earlier when he introduced the glass corner window. "Restricted space simply isn't there," Wright exclaimed. "Right there where you've always experienced this interior construction you take a look at the sky." This liberation of space to space, the essential expression of freedom in architectural design, Wright developed further in his Johnson research tower design where the cantilevered (anchored and projecting) brick bands of the facade disavow any structural role. At night we are equally conscious of the circular balconies of the cantilevered intermediate floors of the laboratory. The entire structure is hung on a central mast, emancipating the space enclosed.



Johnson Wax Research Tower.

Concrete and Curves

Wright's loyalty to concrete, seldom a favorite material with American architects, never wavered after the success of Unity Church. But the structural daring available to concrete was realized only late in the architect's life in such buildings as the Solomon R. Guggenheim Museum of Art on New York's Fifth Avenue. These structures of curved, circular, oval, elliptical, and even spiral forms dominate Wright's designs after World War II. They are found in buildings as diverse in purpose as a laundry, a Greek Orthodox church, or houses for two of his sons, in Arizona and in Maryland.

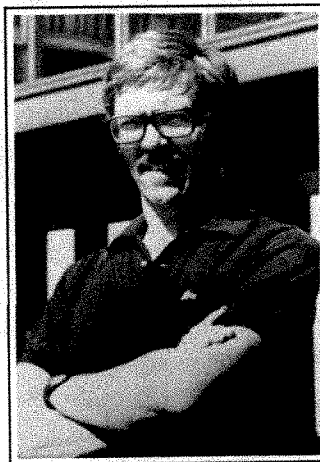
The freedom of anchored concrete pylon and the cantilevered roof slab permitted the audacious designs of the architect's later work, and remain to challenge all architects who see in building a great liberating and supporting force for human activity rather than a limiting and restraining discipline. It is the essence of the life work of this architect, frequently artistic gadfly and national scold, that through his many styles and manners the central idea, always expressed in structure, was freedom.

TOWARD AN "IMPURE" ARCHITECTURE

By Franz Schulze

The sweeping and unconventional theories of Robert Venturi about the urban environment have set off a lively debate among American architects. Venturi rejects the pervasive concern of modern architecture for simplicity, purity and functionalism. He proposes instead that architects recognize the vitality to be found in the "vulgar" and "chaotic" elements of 20th-century cities.

Franz Schulze, who here examines Venturi's ideas and buildings, is professor of art at Lake Forest College and art critic for the *Chicago Daily News*. He also writes regularly on architecture for various journals, and is currently completing a book about Chicago architects and architecture of the past 30 years. He is the author of *Fantastic Images: Chicago Art since 1945*.



During the past decade American architects have been paying increasing attention to a radical view of architecture which gathered most of its initial adherents in the early 1960's from among the vanguard designers located primarily on the eastern seaboard of the United States. Its most authoritative enunciation has come from one of its practitioners, the Philadelphia architect Robert Venturi, in his books, *Complexity and Contradiction in Architecture* and *Learning from Las Vegas*. (Venturi's wife and partner, Denise Scott Brown, has collaborated with him both in his writings about architecture and in the design of buildings.)

So far the theories developed by Mr. Venturi and his cohorts have not congealed in a simple and definitive name. "Symbolic" or "associational" or "pop" architecture; "accommodating" or "inclusivist" design; "chaoticism" or "non-judgmental esthetics": these are some of the formulations that have been advanced, and while in sum they suggest something coherent about this new philosophy of building, no one of them has managed to be both tidy and comprehensive.

Mr. Venturi himself at one point called it "nonstraightforward" architecture, which suggests that the appropriate place to begin discussing it may be somewhere other than architecture—say, painting. Certainly Mr. Venturi's ideas and designs reinforce an old suspicion

that modern architecture owes a greater theoretical debt to modern art than vice versa.

When *Complexity and Contradiction in Architecture* was published in 1966, "Pop Art" had already developed an esthetic affirmation of its own: in the ordinary object there was (at least) truth; in the chaos and flotsam of contemporary urban life, (at least) vitality. This art, which centered around a playful fascination with everyday phenomena (from soup cans to photographs of Marilyn Monroe), took an ironical and sometimes contemptuous view of the heroic stance and moral overtones it detected in the Abstract Expressionism of the 1950's. For "Pop" artists the environment seemed to possess a vigor and excitement in the very vernacular which "fine" artists had so long either fought or bypassed. Avoiding any moral or esthetic judgments of common life, "Pop" endeavored to learn something from it, and in so doing gave back an art that included rather than excluded all the confusing imagery of that life.

From "Pop" Art to "Pop" Architecture

The implications of "Pop" as a practical esthetic beyond painting and sculpture were not lost on Robert Venturi. In fact, the very terminology I have used here can be found frequently in Mr. Venturi's own assessments of the contemporary architectural scene. Roughly equivalent to the high-minded views of the proponents of abstraction in painting is what he calls orthodox modern architecture, with its basic belief that the environment has been corrupted and vulgarized by laissez-faire commercialism, and can be saved only by a morally ambitious program of ordered, unified, tasteful planning. What is common to much of the thinking of Frank Lloyd Wright, Le Corbusier, Mies van der Rohe and the Bauhaus school is the utopian desire to cleanse the environment of chaos and blight by an architecture of clarity, simplicity, purity and functionalism.

The skepticism that grew in Venturi, as he contrasted these objectives with the actual impact which the modern architectural movement has had on modern society, was not unlike the reaction of the "Pop" artists to abstract painting. Modern architecture, he believes, has *not* suc-

Robert Venturi and Denise Scott Brown, his architect-wife and collaborator.



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ceeded in reordering the world, or in helping it become a saner, more humane place. Chaos is an unavoidable and overpowering fact of the contemporary urban environment. If architecture is to address itself to this total environment with eventual real effectiveness, it seems likely that some view and some set of standards other than those of modern orthodox architecture must be applied.

Venturi's criticism rests on more than the assessment of solutions to the problem of modern chaos and in fact involves a significantly different understanding of the problem itself. Perhaps the chaos deserves a fresh look. Are we sure it is quite so poisonous, so utterly unredeemed, indeed so "chaotic," as modern theory considers it? Venturi's answer is "no," and he adds that "complexity and contradiction" are often what make works of art both exciting and profound. T.S. Eliot, he remembers, "called the art of the Elizabethans 'an impure art,' in which complexity and ambiguity are exploited: 'in a play of Shakespeare... you get several levels of significance.'" He quotes literary critic Cleanth Brooks: "If the poet... must dramatize the oneness of the experience, even though paying tribute to its diversity, then his use of paradox and ambiguity is seen as necessary."

Venturi claims modern architects have denied all this:

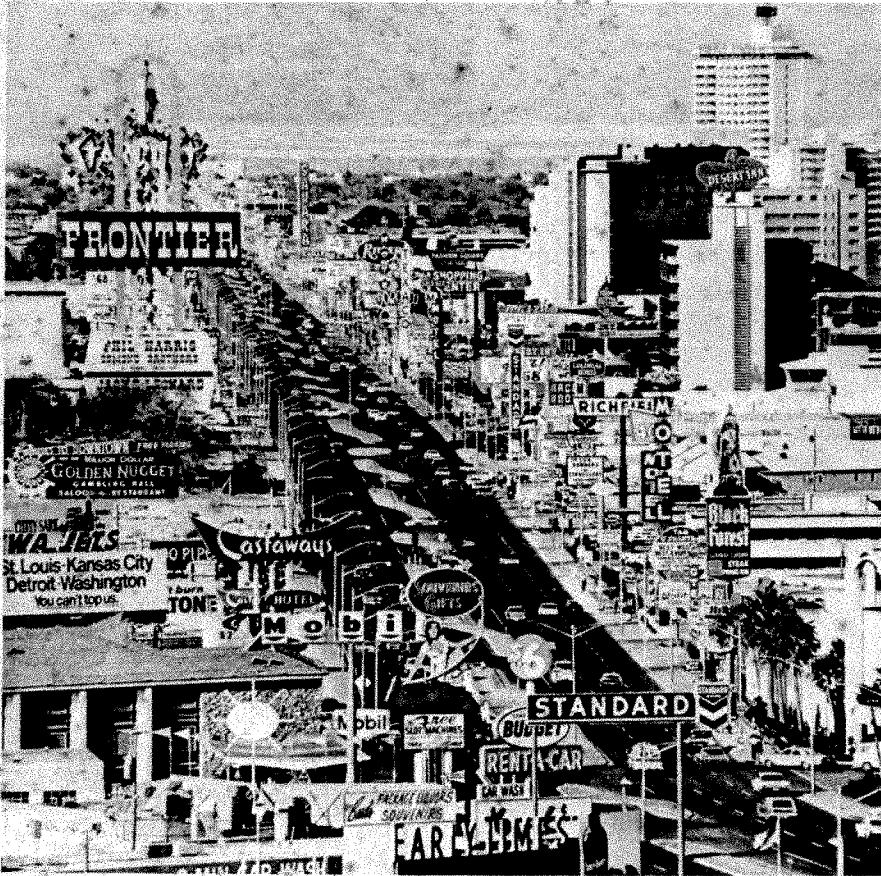
In their attempt to break with tradition and start all over again... they acclaimed the newness of modern functions, ignoring their complications. In their role as reformers, they puritanically advocated the separation and exclusion of elements, rather than the inclusion of various requirements and their juxtapositions.

He then supports his argument by analyzing the many monuments of the past—from a staircase designed by Michelangelo to the Town Hall in Bruges, Belgium—which have been enriched and enlivened by ambiguity, incongruity, formal paradox. He concludes from these examples of successful rule-breaking: "Apparent irrationality of a part will be justified by the resultant rationality of the whole, or characteristics of a part will be compromised for the sake of a whole."

Unity Disguised as Chaos

This dictum led Venturi to the observations he recorded in his 1972 book, *Learning From Las Vegas*. Here he decided, like the Pop artists, to reconsider "chaos" with a fresh, cold eye, in order to examine without prejudice the "honky-tonk," neon-lighted, nightclub and gambling casino "Strip" section of Las Vegas in the western U.S. state of Nevada. By the canons of orthodox modern taste, this area is regarded as the epitome of architectural ugliness and unregenerate urban banality. Venturi affirms that what he found resolved itself into a kind of unity—a subtler, more complex unity than the simplified purity of line preached

Toward an "Impure" Architecture



The Las Vegas Strip—"a complex, vital, informal autoscope."

by modern architecture, and one possessed of a vitality that could be traced largely to the paradoxes and ambiguities of Las Vegas design.

The Las Vegas Strip is in fact very clearly and obediently—albeit complicatedly—oriented to the kind of human activity that goes on there. It is first of all an autoscope—an environment through and across which man moves by car, quickly and fitfully, as often at night as by day. Space thus is a fluid, shifting thing along the Strip, perforated by light and dissolved in movement rather than articulated by form. When man moves on foot at all, he does so customarily within a semi-darkened interior—a club or casino—in which "space is limitless because the artificial light obscures rather than defines its boundaries" and "time is limitless because the light of noon and midnight are exactly the same." Traffic patterns, on the other hand, are clear and coherent—whether on account of pavement markings and directional symbols or the great marquees that attract and point the customer to his destination—via, it should be added, vast parking lots conveniently related to buildings that have mortified themselves into formally anonymous and cheaply constructed boxes.

Architecture as Communication

In short, the architecture of the Strip in an environmental sense is based on communication rather than form. It is symbolic rather than spatial, and it is informal, anti-heroic, non-monumental. Venturi finishes his study with the admonitory insistence that "Las Vegas is analyzed here only as a phenomenon of architectural communication; its values are not questioned." What he has sought to establish is that Las Vegas is ordered by an architecture that frankly and candidly accommodates itself to immediate needs, without the intercession of an inhibiting theology of accepted theory, good taste, and purism. "Chaos" is not seen as chaotic; it is something that frequently abounds in life and has an energy and a rich coherence of its own—from which we can not only learn, but perhaps fashion a conscious architecture that will make sense of our shifting, fluid, mutable world.

Charles W. Moore, Venturi's former colleague on the faculty of the Yale School of Architecture, shed some further light on Venturi's intentions when he wrote that our understanding of place—"the ordered extension of man's idea about himself in specific locations on this earth"—has changed enormously in the 20th century, because of the whole electronic revolution.

Today, our own places, however, like our lives, are not bound up in one contiguous space. Our order is not made in one discrete inside, neatly separated from a hostile outside, in which we are free to structure a visible simulation of our vision of the world. The world that means the most to us... has for the past half-century not really been visible anyway. We enjoy our capacity to make immediate electronic contact with people anywhere on the face of the globe.... Our new places, that is, are given form with electronic, not visual, glue.

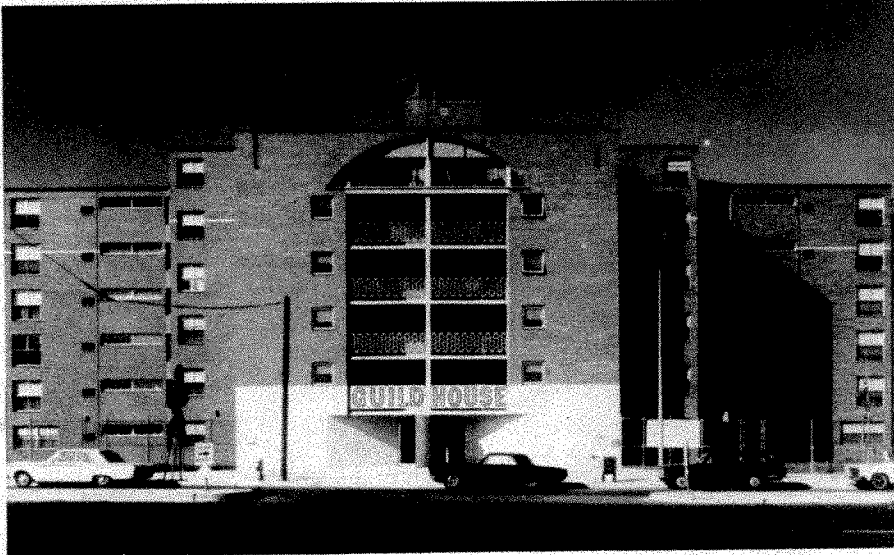
In Moore's understanding of "place" in the 20th century, communication takes precedence over the old fixed, static and "hierarchic" relationships of volume and space. It would follow for him, then, that contemporary architecture should endeavor to express itself more through ideas, signs, symbols and traffic patterns than through the more "abstract" manner of formally ordered volumes and spaces. The disenchantment that both Moore and Venturi have felt toward the "utopian" planners makes them believers in the vitality of what people do who are left to their own resources to make a "place" for themselves—in Moore's words—"with as much of life as they can include, rather than as little." To this Venturi adds, "More is not less," reversing the famous Bauhaus slogan, "Less is more."

The theories of Moore and Venturi and their confreres have many proliferating aspects and implications, but the question must finally be raised: What do their buildings look like?

Toward an "Impure" Architecture

Venturi's Buildings

Probably the most famous of the comparatively few buildings Venturi has actually erected is the Guild House, a Society of Friends (Quaker) home for the aged which at first glance draws hardly any attention to

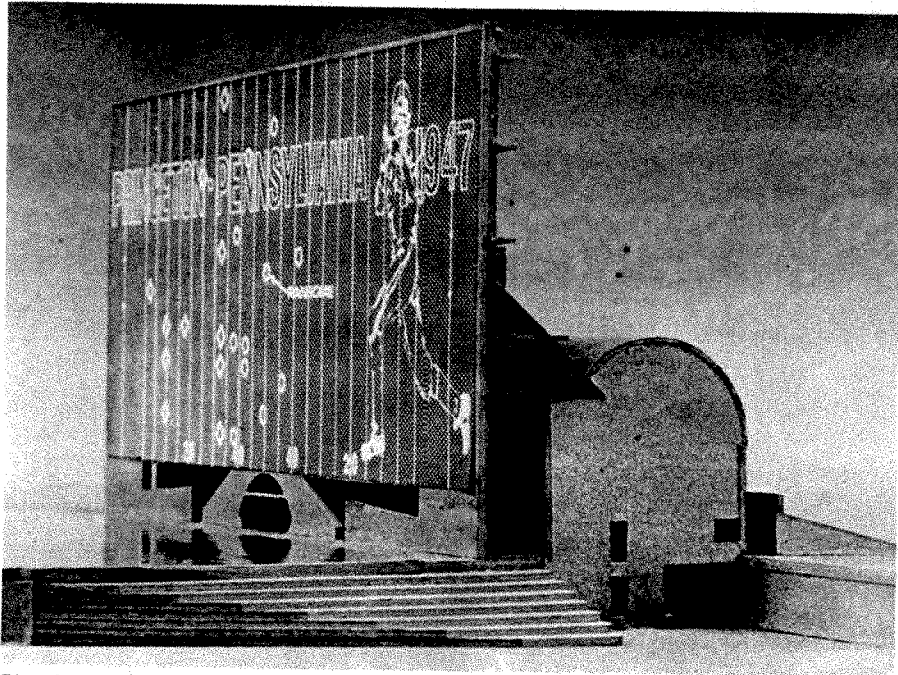


Guild House—Venturi's home for the aged, is deliberately "ordinary" in design.

itself as it faces south on Philadelphia's Spring Garden Street. Part of the reason for this modesty is the low budget the architect had to work with, but a larger part is a result of his conscious intention. He elected to blend the building into its rather drab neighborhood, and designed it to look very much like an ordinary housing project. It is in that neighborhood, he points out, and it is an ordinary housing project. There is about as much implicit irony here as candor, but the irony of the gold anodized (and controversial, to say the least) television antenna which surmounts Guild House is altogether explicit. For Venturi the antenna is a symbol of today's elderly, specifically of their limited recreational possibilities; hence it is meant to point with sardonic hardness to the general pathetic situation of old people in old people's homes. It is architecture functioning as social criticism. (Whether the occupants of the building would appreciate this sardonic gesture, or would prefer a more conventionally esthetic decoration, is a question that seems not to have been asked by the architect.)

Such a device illustrates the heavy emphasis Venturi places on the element of association in architecture. He abhors the tendency of modern architecture to strip decoration from building—that is, to regard the very spaces and forms of the building itself as its decoration—for in addition to stultifying the architect's formal vocabulary, this inclination ignores the traditional power of a building to express ideas and values as well as spatial relationships.

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Plan for *National Football Hall of Fame*—electronic billboard conveys mobile images.

The logic of Venturi's position would suggest in fact that the process be reversed: the idea and the communication should guide the design of the structure. In his unrealized proposal for a National Football Hall of Fame he has taken precisely this approach. Here the building proper (which is meant to house relics and records, show displays and movies, and carry on the customary functions of a national sports shrine) is dwarfed by an immense billboard whose 200,000 lights are electronically programmed to produce moving images, words and phrases, even diagrams of football plays. The billboard and its messages, visible across a broad parking lot, would not be mere adjuncts to the building, but an integral part of the whole enterprise. Indeed, they would likely be the central element, because, as Venturi says, "Symbols... can evoke the instant association crucial for today's vast spaces, fast speeds, complex programs, and, perhaps, jaded senses which respond only to bold stimuli."

Anti-Architecture?

When critics call Venturi's theory anti-architectural, they usually mean it as strong criticism. He himself simply doesn't accept it this way. He has in fact declared that "Ours is a different age; non-heroic (the anti-hero is our hero), non-universalist, anti-architectural." And he has been willing to push this idea as far as he feels the problems of the age require.

Critical reaction has tended to focus on Venturi's theories rather than

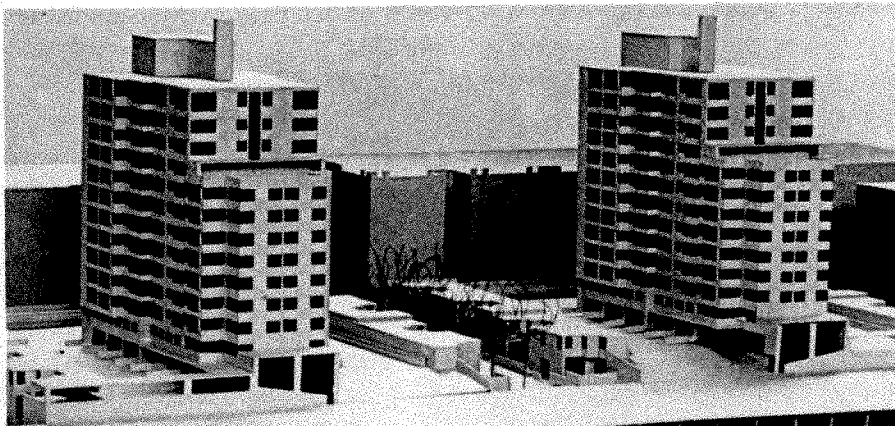
Toward an "Impure" Architecture

his designs, for he has yet to work with a budget generous enough to produce the kind of real structure that could be regarded as a complete and definitive translation of his theories. His champions and detractors have lined up in clear-cut, passionately opposed ranks. Most of his supporters are part of or related to the architectural Establishment of the East Coast, where sympathy for advanced ideas has traditionally been greatest in America.

Whether Venturi indeed represents the *real* avant-garde would be disputed by many other architects, who share with Mies van der Rohe the view that technology is an instrument of decisive and necessary potential to architecture in this century. These designers would hold that it is they who are most "advanced," by virtue of their commitment to the use of the latest tools of technology. And certainly in Venturi's thinking there is a distinct disenchantment with technology and with much that is associated with "planning" in the conventional contemporary sense. But that is precisely what his East Coast admirers find attractive about him, that is to say, advanced. A singular hallmark of the recent arts has been a disenchantment with social utopianism and intellectual optimism, and this has caused an equally persistent thread of irony to run through them. Since these hallmarks are evident in Venturi's theories too, he seems to many of the eastern group to be a good deal "further along" than the modernists in his understanding of architecture's problems in an aging century.

Even so distinguished a critic and historian of architecture as Professor Vincent Scully of Yale University has been won to Venturi's way of thinking. Of *Complexity and Contradiction in Architecture* Scully has said, "...it is probably the most important writing on the making of architecture since Le Corbusier's *Towards an Architecture* of 1923.... The older book demanded a noble purism in architecture, in single buildings and in the city as a whole; the new book welcomes the contradictions and complexities of urban experience at all scales." And Arthur Drexler,

Prize-winning *Housing Project* designed by Venturi aims at forms familiar to the public.



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who heads the architecture department of New York's Museum of Modern Art, believes that Venturi has produced "the most original and coherent theory of architecture to come along in several generations."

There is no doubt that most of the historic avant-gardes of this century have gone on to become the dominant movements of their days, and such a destiny may await Venturi and his views. Nevertheless, many of the arguments against him at this point do not appear to be the standard sort of reactionary defenses associated with the historic rearguards. For one thing, the editor and critic Peter Blake rejects the view that Venturi's theories are as new as his supporters claim. Blake even questions some of Venturi's premises, notably that orthodox modernist architecture is obsessed with pure, and mere, order:

Only Mies, of the leading architects of this century, could really be accused of having dreamed "prim dreams of pure order"; yet this would be a rather superficial appraisal: Mies's whole notion of "universal space" implies unpredictable changes, contradictions, etc.

Venturi's Critics

But most of the opposition to Venturi is not addressed to the issue of his originality. While numerous critics find his ideas fascinating to speculate about, they do not admire the actual products or even the philosophical implications of the theories. Even if one sympathizes with Venturi's disenchantment, they would argue, and with his consequent sense of expressive irony, it is difficult to appreciate the architectural perversities which both elements lead to or permit: vulgarization of form and cheapening of materials are hardly factors to be exalted.

Moreover, if one admits the failure of the old utopian order, the old chaos—or the new—seems a poor and unprofitable exchange. Venturi's mortification of architectural form, his concept of "anti-architecture," may be a fetching idea, and fetchingly equivalent to the anti-form, anti-art tendencies in recent painting and sculpture. But, his critics say, such an analogy blurs an important distinction: painting and sculpture can afford this self-denial, having in modern times become highly intellectual spheres in which any theoretical postulate is admissible, whereas architecture remains a utilitarian medium. To mortify it as form is to repeat the device of the 19th-century salon painters who sought to turn painting into literature, and who compromised its form in the process. (Those painters, too, elevated the factor of "communication" in their work.)

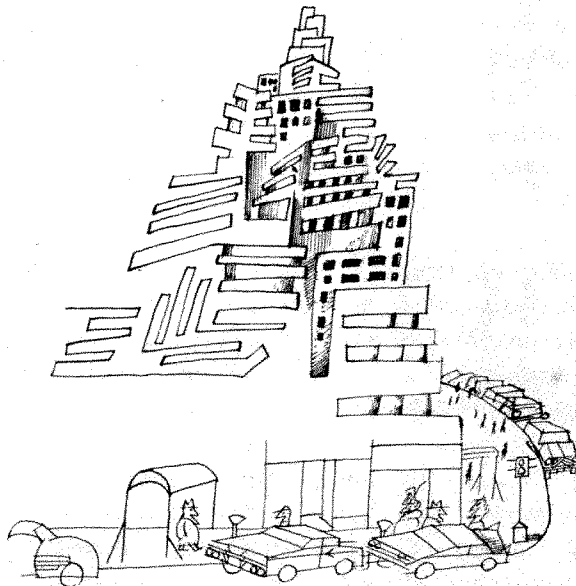
Hence the accusation that Venturi himself, not the modernist, is the harbinger of architectural impoverishment, not to mention barbarianism. This countercharge is related to yet another, which maintains that Venturi's rejections of "utopian order" and his willingness to

Toward an "Impure" Architecture

"accommodate to what people do" are not so much populist ideas as they are crypto-aristocratic, for in populist ideas there is no room for the keenly sophisticated ironies, sardonic subtleties and mannerist perversities which run through his ideas.

The depth of the split between the Venturians and their opponents can be discerned from the way Venturi is ignored as well as from the attention he attracts. In Chicago, where a new tradition indebted largely to Mies van der Rohe and the International Style has been active for well over a decade, Venturi is little known and less discussed. Among these few architects who have troubled to acquaint themselves with him there—Chicago is architecturally eminent enough to have its own inward-turned Establishment—opinion about his theories ranges mostly from disengaged indifference to unqualified hostility. They reject Venturi's view that orthodox modern architecture renounces idiosyncratic buildings in favor of abstract types, and for this reason has limited urbanistic capabilities. Instead, they point to present-day downtown Chicago as one of the most architecturally impressive urban complexes in the world, yet deeply influenced by "orthodox modernists."

It may be that this sharp division of opinion is more a sign of the health of the American architectural body than of the parochialism of its parts. Certainly in the United States today there is a striking variety of architectural first principles in operation. If the ultimate importance of Robert Venturi's theories remains in dispute at this time, his forceful contribution to the national variety does not.



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ARCHITECTURE: EAST AND WEST

By Minoru Yamasaki



Asian, and particularly Japanese, architecture has qualities of serenity and scale that can help balance the American and European penchant for buildings that are "exciting" and monumental, writes a distinguished American architect of Japanese ancestry. He here outlines a philosophy of architecture that combines the virtues of both traditions.

Born and educated in the west coast state of Washington, Minoru Yamasaki now heads a major architectural firm in Michigan. He has won numerous awards, including that given by the Architectural Institute of Japan for his design of the U.S. Consulate General in Kobe. Other notable buildings designed by Mr. Yamasaki include an airport in Saudi Arabia, the U.S. pavilion at the World Agricultural Fair in New Delhi, and the office building of the Reynolds Aluminum Company in Detroit, Michigan.

Frequent visits to the Orient and to Japan have helped to clarify my belief that the understanding of certain qualities in Japanese architecture can help American architects shape an environment conducive to a better life. Being a Nisei (second-generation American citizen of Japanese ancestry) probably makes me a logical candidate for this kind of discussion. Though I jokingly protest that those who think my buildings have a distinctly Oriental flavor have seen my face or name before seeing my work, I am fully aware that my admiration of certain intrinsic qualities in Japanese architecture has had a positive effect on the underlying philosophy on which I try to base my designs.

Here I will try to outline my ideas for a philosophy of contemporary architecture and also show how an understanding of traditional Japanese architecture contributes to developing this philosophy. I believe it is most important to clarify the objectives of such a philosophy because in America and in the rest of the world there are very influential architects who sincerely believe that all buildings must be "strong." In explaining the word "strong" in this context, the definition seems to connote "powerful"—that each building should be a monument to the virility of our society. These architects look with some derision upon attempts to build a friendly, more gentle kind of building.

The basis for this attitude is that our culture is derived primarily from Europe, and most of the important traditional examples of Eu-

European architecture are monumental ones. Western architectural education has been slanted heavily toward Europe in architectural history, almost completely ignoring the very important periods of architecture of other parts of the world, such as Saracenic, Japanese, Chinese, or Indian. European historical architecture, for the most part, has been based on the quality of monumentality. The need of the state, church, or the feudal families—the primary patrons of these buildings—to awe and impress the masses of people is clearly reflected in most of the important historical examples of architecture in Europe.

It is inevitable for architects who admire these great monumental buildings of Europe to strive for the quality most evident in them—that of grandeur. Deep in the heart of every architect, and I am no exception, is the ambition to erect a Chartres or a Saint Peter's Cathedral for his own time. The overwhelming uplift and excitement experienced in seeing buildings such as these cannot help but influence our thoughts and our work.

A Reflection of Society

Yet we must realize that the buildings we build for our times have a totally different purpose. The buildings necessary for our society should not be objects to awe and impress us, but should be part of an environment to enhance our way of life and to serve as a thoughtful background for the activities of contemporary man. Attempts to turn commercial buildings, schools, or residences into cathedrals or palaces can only result in buildings completely incongruous to our way of life. The elements of mysticism and power basic to this kind of building have little place in a world of free and rational men.

Throughout history the architecture of a particular society has reflected the beliefs and life of that society. The historically and artistically significant architectures were images of the life that went on within their walls, and reflected the particular beliefs of the society. The Greek architecture that we so admire was the product of the democratic belief of Greek civilization. Egyptian architecture reflected the absolute power of the Pharaohs and the enslavement of the people. The pompous, superficial life of the French Renaissance monarchs can be well seen in their palaces. Yet, in England, the Renaissance expressed

Minoru Yamasaki: "Century 21"—U.S. science exhibit building at Seattle Exposition.



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the beginnings of the dignity, the pride, and the humanity that is the great heritage of the English-speaking peoples today.

The architecture of our society must be consistent with our ideals and our way of life. Though its obvious purpose is to house the complex activities of man, its more positive attribute is to elevate the spirit of humanity and be sympathetic and integrated with its idealism. If we believe in freedom for the individual and in the dignity of man, then the qualities needed to implement these beliefs must include love, gentleness, joy, serenity, beauty, and hope.

What I am advocating is the philosophy of humanism applied to architecture, a relatively new idea historically. In a humanistic architecture, the dignity and individuality of man must be the primary objective. If a building is too strong or brutal, it tends to overpower man. In it he feels insecure and uncomfortable. A public monument to the ego of a particular owner or architect is contradictory to the principle that each man who uses the building should be able, through his environment, to retain his sense of dignity and individual strength.

A humanistic architecture must aspire to the following goals: (1) To enhance the enjoyment of life through beauty and delight; (2) To be uplifting so that we can reflect the nobility to which man aspires; (3) To give order and, through order, a background of serenity for the complex activity of modern life; (4) To be truthful, since our buildings must have an intrinsic clarity of structure which is natural and inevitable for the purpose they fulfill; (5) To have full understanding of and fidelity to our technological processes, so that we may conserve our efforts and resources in the task of rebuilding our environment; (6) To be in scale with man so that he is secure and at ease in his environment and intimately related to it.

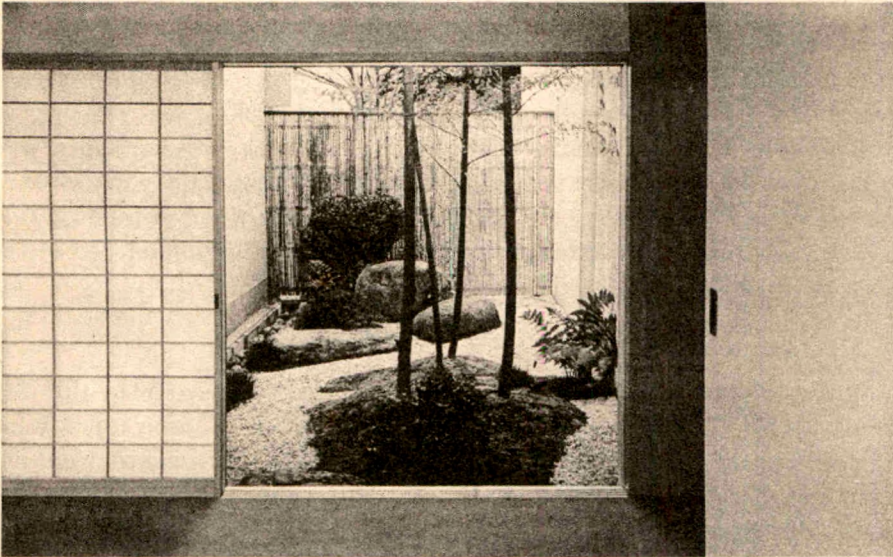
Most of these qualities are basic to the older architectures. Proportion, elegance of detail, nobility exist in many European buildings of the past. However, in two areas—the understanding of serenity and the understanding of scale—we need further clarification from historical examples. It is here that I believe we can learn much from Japanese architecture.

A Restaurant in Japan

To explain my reasons for this, I would like to describe a visit which I recently made to a building in Tokyo. The building was a relatively new restaurant, designed by the architect, Horiguchi, who is master of those who build within the Japanese tradition. Facing the street, the exterior was simply a well-detailed wooden fence, the characteristic facade of most urban Japanese-style buildings. Once within the gate, however, it was apparent that this was a very special place. The combined feeling of peace and pleasure that I have found in the Katsura Palace, the Stone Garden, and in so many other examples of Japanese

architecture, seemed to envelop us at once.

We walked down a corridor of gardens lined with a variety of beautifully composed trees and shrubs, which ended with a delicate vertical bamboo fence. We made a planned turn to find an exquisite view, the most perfect arrangement of roof and building, walks and trees. Each detail must have been extremely carefully conceived. Even the paving, with small stones set in cement, was irregularly interrupted by large pieces of rectangular stone to give substance, as rocks which rise from



Horiguchi: Tokyo restaurant, view of garden—"a delightful, peaceful dream."

the surf give visual interest to an expanse of sea. The trees were particularly handsome specimens. Their overhanging and twisted branches were held up by wooden supports so carefully shaped and sensitively placed that the total composition would have been incomplete without them. The walk passing through the garden floor of gravel was similar in texture. It was just different enough in color to enhance the whole without becoming the too-strong stripe so often true of our garden walks.

The threshold to the building was a large, warm-hued stone wet down to reveal its beautiful texture. It was just high enough to become a step to the raised platform of the floor. We removed our shoes and quietly stepped on the matted floor of the low-ceilinged entrance hall; turning again, we padded down a short section of semi-dark corridor to find ourselves in a breathtakingly lovely room. The windowed *tokonoma* (a raised decorative corner) gave opportunity to silhouette the exquisite flower arrangement and holder against the soft light of the rice-papered *shoji* (partitions made of translucent paper screens). In the *tokonoma* was a narrow hanging, an essence of landscape, which seemed to balance the living landscape beyond the adjoining glass

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wall. The handsome low table before the *tokonoma* was the single piece of furniture in the room. The clutter that we suffer in America is apparent upon seeing such a room as this.

On another side of the room, ceiling-high glass sliding doors with *shoji* stacked on one side framed a deep garden view of sky, trees, and stones in a gravel sea. On the adjoining wall were panels of *shoji* of two heights with impossibly thin muntins (or sash bars). My friend slowly raised the three lower panels to reveal a view of a shallow garden, lovely with slender green bamboo stalks and dark stones against a silvery weathered wooden fence. By allowing only the lower sash to open, one could control the picture so as to eliminate the sky and bring out the beauty of ground and stones and moss and stems.

All these beautiful elements were tied together with a skillful arrangement of posts and beams and straw-colored mats with strong black edges. The details were perfect—soft, lovely wood of quiet grain fitted with superb craftsmanship, gray-green plaster joined perfectly to wood providing deep contrast to luminous *shoji*.

Serenity and Scale

It was all like a delightful, peaceful dream, far away from the tumult of workaday Tokyo, Detroit, or New York. Then, waking up, I was again aware of the impracticality of trying to house 20th-century civilization in the framework of traditional Japanese architecture. Scale, structure, and materials are all inappropriate for the demands of our time. The discipline of total simplicity would be impossible for us. Yet the complete emotional satisfaction of each of many experiences I have enjoyed in Japanese architecture has developed a positive feeling in me that we of the 20th century can learn from it.

The instilling of a significant degree of this quality of serenity is necessary to our future environment. The chaos caused by political turmoil, by traffic, by vast increases in population, and by the tremendous impact of the machine, demands that man must have a serene architectural background to retain his sanity. Interspersed with this serenity must be delight—the delight of interesting silhouettes, of water-play, of variety in our indoor and outdoor spaces. But the unifying quality must be this serenity, a physical representation of the belief that we can live in quiet dignity. The experience of Japanese buildings such as the one I have described should assure us that it is possible to translate this quality into our western environment in our terms.

THE ARCHITECT AS CITY PLANNER

By Victor Gruen

A famous architect sees a new role for his profession: to create buildings and environments not primarily for the rich and powerful, but for the majority of mankind. And in an urbanizing world, this means saving and renewing the cities by making technology—especially the ubiquitous automobile—the servant of man.

Victor Gruen was born and educated in Vienna, but has lived and worked in the United States since 1938. As head of one of the country's leading architectural firms, he played a major role in planning redevelopment projects for various American cities, including Fort Worth (Texas) and Boston (Massachusetts). His books include *The Heart of Our Cities* and *Centers for the Urban Environment*.



The scope and character of the architectural profession has changed decisively in the 20th century. Neither the members of the profession nor the public at large have fully appreciated the impact and nature of this change.

Architecture in former centuries was a commodity of which only the rich and powerful could and did avail themselves, in order to achieve beauty, impressiveness and glory for those structures that they required for their personal housing, for their staffs, for their government buildings, for their monuments and final resting places, and for structures with which they wished to adorn their cities and their country places. In general, social orders in the past, with few exceptions, were constructed on the principle of the pyramid, with a small minority on top and the great majority at the bottom.

This social pyramid is flattening out; its peak has disappeared, and the base has been broadened. The architect's client no longer desires palaces, castles, mansions, but the planning and design of facilities for the multitude. Mass housing, industrial plants, schools, office structures, shopping facilities, airports, bus terminals, are the building types which keep 90 percent of all architects busily engaged.

A tremendous gap exists nearly everywhere between the need for such buildings and their actual production. Pressure has been built up to

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fulfill the needs with the greatest possible speed and the greatest possible economy. The possibility of personal expression on the part of the architect, as well as the client, has under these circumstances been considerably reduced. The new client, who is actually a majority of mankind, wishes to see these requirements fulfilled quickly, cheaply and in such manner as to give him a well-functioning product.

Man vs. Machine

Aside from this sociological change, secondary factors significantly influence architecture. We are living in a time of population explosion and rapid technological development. We are running short of space in our urban areas all over the world; they are congested not only with the rapidly growing flood of mankind but also with a swelling army of mechanized slaves in the form of machines of all types, of which the most conspicuous is the automobile.

The relationship between the population of mechanized slaves and human beings will, in the long run, overshadow the importance of the strife between human beings themselves: the relation between races and nations and the differences between political systems. To bring order into this relationship, with the aim of achieving actual mastery by the human being over his mechanical slaves, is the great challenge of our time.

The most obvious threat to mankind by its own technological brain-child is contained in the existence of tools like the atomic bomb which, if we cannot obtain mastery, threatens to blow us all to bits. The control of this mechanical slave is a matter which rests in the hands of our political leaders; it is outside the sphere of the architect. But, assuming optimistically that this evil genie can be dealt with, the threat of the rest of the mechanical slaves remains, and this threat should concern us as architects who are the givers of form to the human environment.

In contrast to certain expressions of the technological age—such as industrial machines that can be contained in factories, airplanes that can be contained on air fields and in the air, railroads that can be limited to their rights of way, rockets that may bother other planetary bodies more than our own—there is one that by its very nature has a tendency to spread over the entire man-made and natural environment. This one expression of our technological age is the automobile, the birth rate of which is far in excess of that of humankind itself, and which—at least in the Western world—threatens to push the human population into a tight corner.

In the United States, the automobile population now amounts to approximately half of the human population, but the space requirements of each of these mechanical beings are far in excess of those of their human masters. The space required from the birth (manufacturing plant) to the death (automobile cemetery) and the intervening

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needs, for moving, storing, housing, repairing, beauty care, mechanical health, of the automobile are such that the total expenditures made for these purposes are higher than the analogous ones for human beings. Thus, the greatest challenge to the architect today is the creation of urban organizational patterns which will reinstate man as the master of the urban environment and relegate his slaves—the automobiles—to their proper role as major appliances that have to perform a useful function.

Our cities today are witness to the fact that we have not yet succeeded in this task. Automobiles not only kill or maim thousands each year, but also spread the greater long-term dangers of poisonous fumes and nerve-racking noise. Paradoxically, in spite of having been invented and constructed as a means of mobility, they have also robbed us of that very mobility in our city centers and surrounding areas by congesting streets and highways.

City dwellers have reacted against this regime of terror in two ways. First, they have fled from it into faraway suburbs, bringing about the scattering of our cities. Secondly, they have tried to humor the mechanical dictator by facilitating its living conditions, by broadening streets, demolishing human habitation and activity structures in the process, by destroying parks and monuments, by bisecting established communities, by giving over more and more human living space to the mechanical beings, in the form of car storage areas, parking lots and garages, gasoline stations and auto repair shops, sales display lots, and so forth. In the most automobile-conscious city in the United States, Los Angeles, the point has been reached where two-thirds of the downtown area has been abandoned by the human population and surrendered to these mechanical slaves.

Both of these actions—flight and surrender—have not pacified the insatiable demands of the car. They have, however, nearly succeeded in destroying the desirable qualities of cities and metropolitan areas, and have converted many of our city cores into economic graveyards and our suburban areas into monotonous cultural deserts.

Counterattack against the Automobile

The waves of the enemy assault have come with such suddenness and with such superior mechanical power that we have been caught unprepared and by surprise. The time, however, has come for the counterattack.

The automobile as a means of transportation is probably going to stay with us and even grow in importance, at least for the foreseeable future. We will have to devise ways and means of living in the automobile age and still remain masters of our fate and our environment. In order to accomplish this, we will have to reorganize our urban patterns and our entire approach to land usage in cities, metropolitan areas, and country-

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side. We will have to employ the same ingenuity that has enabled us to create our technological apparatus to achieve a healthy relationship to it.

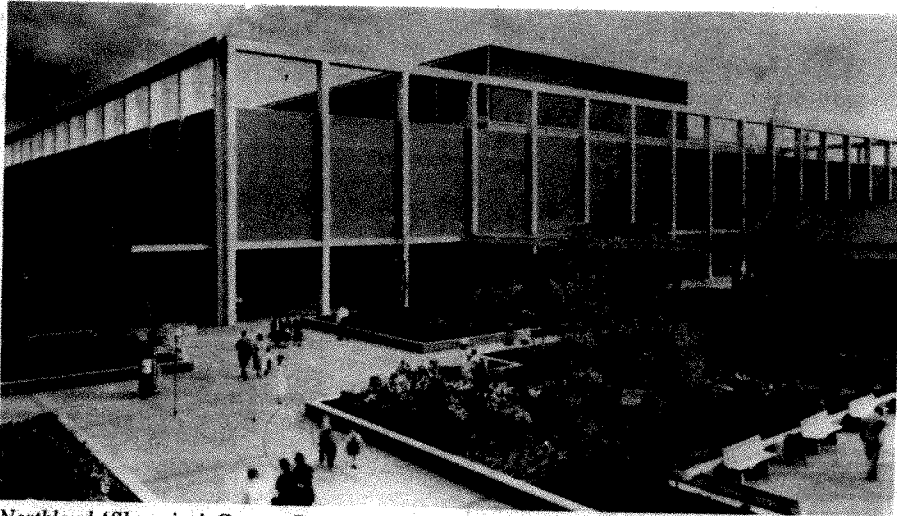
The basic planning philosophy that underlies the counterattack is that of reshaping the urban environment into a cellular pattern similar in character to the system that Nature herself utilizes in every one of her manifestations, from the single cellular being—the most primitive expression—to the organization of the planetary system. Cells and cellular forms in the urban pattern will have to vary in size and composition, depending on needs and requirements. Simple cellular forms might be residential neighborhoods; large and more complex ones might be constellations of various types of cells, some of which will be devoted to housing, others to working, education, administration, shopping, cultural and recreational activities.

Thus, cells will form clusters, clusters will form constellations, and many such constellations will make up the galaxy of a metropolitan area. Between the individual cells, between clusters and between the constellations of clusters, open spaces varying in width will remain, to guarantee us contact with Nature, breathing space, areas for sport and recreation. Within them will lie bodies of water, forests and meadows, agricultural land and orchards. These open spaces will permit the routing of communication lines within landscaped areas. This applies to rail lines, rapid transit, and multilane highways (which may one day be electronically operated). Such transportation lines will have branch lines leading to the various urban clusters, and in some cases may surround them in ringlike fashion. In the case of clusters with concentrated activities, transportation lines might be guided underneath them, but only rarely will mechanized transportation occur on the surface. Terminal facilities and storage areas for automobiles will be placed along the periphery of clusters, and only where underground facilities exist will station stops occur in the midst of an area.

Regional Shopping Centers

The most dramatic expression of the new planning approach can be found in regional suburban shopping centers. The largest and best planned of them, like Northland and Eastland in Detroit, Southdale near Minneapolis, and about 50 or 60 more, exemplify very clearly the over-all planning philosophy discussed previously. In Northland Center, for example, structures containing over a million square feet of floor space are erected in the center of a 100-acre land area. The buildings are grouped tightly, forming the human activity core. Between them are pedestrian areas of varying shape in the form of plazas, colonnades, garden courts. All these areas are richly landscaped and made highly enjoyable by fountains, sculpture, rest benches and other amenities. The expressions of art that have been disappearing from our

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Northland 'Shopping' Center, Detroit—designed by Victor Gruen. Pedestrian areas can be used for concerts, dancing, meetings, art shows, and other civic activities.

urban environment and that, like so many of its inhabitants, have escaped—in this case into museums and art galleries—can be found here, integrated with the expressions of architecture and landscaping.

The structures serve mainly selling activities, but beyond that they fulfill social, cultural and recreational needs. There are auditoriums, meeting rooms, a theater, exhibition areas, restaurants, and cafes. Beyond that, the open areas between buildings are utilized to a great extent for civic activities like concerts, dances, meetings, outdoor shows of all kinds.

Outside of the human activity area, and well shielded from it, is the transportation area in which various types of transportation activities are carefully separated. Loop roads surround the 100-acre site and feed into internal drives from which car storage areas for 10,000 automobiles can be conveniently reached. Separate roadways serve bus transportation, with terminals provided near the building cluster. All service traffic—trucks and repair vehicles—moves from the transportation area downwards, underneath the human activity cluster, removing its sounds, smells and sights from public consciousness. Similar clusters have been constructed in the form of office building centers, regional health centers and industrial parks.

The appearance of the regional shopping center with its superior conveniences and environmental qualities has had a double effect on those people who have an economic interest in our downtown areas. The first effect was that of a tremendous shock that, as an aftermath, brought about an awareness that the competitive danger could be averted only if the older downtown areas succeeded in providing similar advantages and conveniences. The second, and even more important, effect was that these regional shopping centers have provided

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experimental workshops in which to learn and perfect the task of mastering the relationship between humans and their technological tools, between automobiles and people.

A Prototype City Plan

This double effect has perhaps been more instrumental than any other event in stimulating new types of planning for our downtown areas and for our urban areas as a whole. A direct effect, for example, was the commission which our office received 10 years ago, to replan the downtown area of the city of Fort Worth, Texas. This plan has become the prototype for over a hundred plans, completed or in the working stage, for other cities.

The problems with which our client confronted us were those typical of nearly every city in the Western world. Because of the tremendous sprawl of the urban area, because of the flight of people and business from the central areas, the downtown area of Fort Worth was economically deteriorating. The question put before us was: Can anything be done to help stop this deterioration and to reverse the trend?

A study of existing conditions revealed that outside of the impressive structures in the heart of the city's center, there existed a ring of blight consisting of residential slums, automobile selling lots, marginal commercial and industrial enterprises. We approached our task by projecting the needs and requirements for a healthy downtown core area for

Author's plan for *renewal of downtown Fort Worth, Texas*, eliminates the private automobile from city core. Service traffic is confined to underground road system, leaving surface areas free for trees, flowers, rest benches, and public events.



the city of Fort Worth to a time 20 years hence, with the assumption that improved accessibility and environmental conditions would be able to bring back into the downtown area those activities that logically belong and should best flourish in a central location within a metropolitan area.

We tabulated the land usage requirements for public and private office buildings, for churches and theaters, for hotels and stores, and all other activities that, because of high productivity in relation to their space needs or because of their importance to the cultural, social, spiritual and recreational life of a metropolis, should be located in the heart area. We included in this tabulation land for residential use for those individuals who, because of their family status or preferred modes of living, would be better served living as close as possible to the main activity area. We excluded, on the other hand, those types of activity that, because of low productivity in relation to their space needs, would be better located in outlying areas, such as warehousing, industry and all facilities connected with the selling or repair of automobiles. The result of our space analysis showed that the area presently regarded as the downtown area of Fort Worth was ample for all present and foreseeable needs and requirements.

Transportation and Renewal

But we insisted that all of this could be achieved only under one crucial condition, namely that most surface vehicular traffic would have to be eliminated from the core area. To provide alternative transportation, we proposed new and improved arterial highways leading from all parts of the metropolitan areas towards the core, and simultaneous improvement of public transportation. Freeways, highways and a loop road—circling the core city area—form a system of grade-separated multilaned traffic carriers with special lanes for buses. Directly adjoining the loop road and within the core area itself we situated multi-level garages with a total capacity of 60,000-car storage spaces. The sites selected for these garages were carefully chosen so as not to require the destruction of any major structures, and so that walking distances from pedestrian exits to the center point of downtown could be held to two and one-half minutes or less.

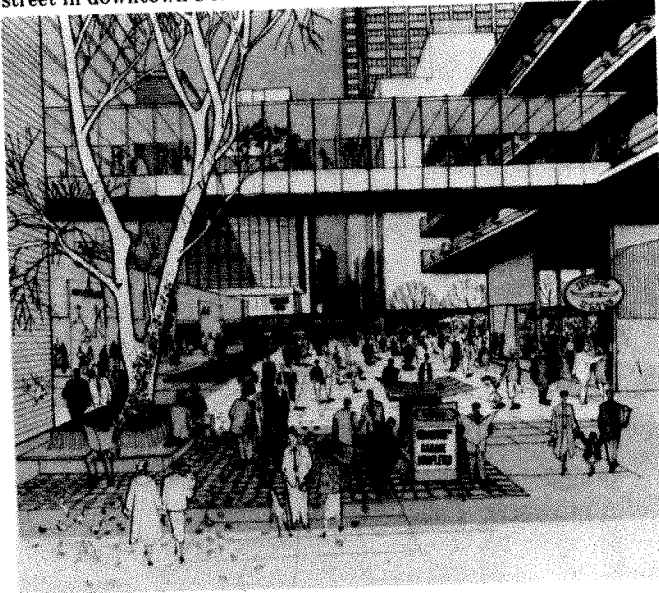
For the downtown core area itself we projected that all existing structures that were in good physical condition would remain, and that new structures serving highly productive purposes and cultural, recreational and social needs would be built on sites that become automatically available because of the exclusion of the automobile from the core area. We demonstrated how the present sterile grid system of the street layout could be amended to a pattern of great variety and interest by creating spacious plazas and squares, where parking lots and parking garages existed. A system of underground

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roads for service traffic was worked out in such manner as to properly service all structures. Thus, all surface areas of the downtown core would be free of any disturbing mechanical traffic, making it possible to introduce planting beds with trees and flowers, rest benches, and to utilize the resulting attractive areas for public events similar to those carried on in regional shopping centers.



Artist's drawing shows how Victor Gruen's plan transforms one street in downtown Fort Worth from traffic jam to pedestrian mall.



An Emerging Urban Pattern

The philosophy outlined in the plan for Fort Worth has stimulated action in all parts of the country and has influenced the action of many European cities. Master plans embodying this basic approach are in various stages of completion for nearly a hundred American cities. Other elements of the newly emerging urban pattern are detectable in

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some of the urban redevelopment projects that have been made feasible through the federal redevelopment and renewal legislation. In many of these projects, clusters of residential buildings including schools, churches and shops, playgrounds and other amenities, have been created, embodying the idea of a pedestrian environment in place of one dominated by the automobile. The best of the urban renewal projects exemplify a new pattern of city living contrasting sharply with overcrowded conditions of the old type, but contrasting just as much with the sprawling character of suburbia.

More and more people recognize that decisive steps must be taken in order to recapture cities for human beings and pry them loose from the hold which machines have gained over them. New tools for the achievement of this aim have been created, notably in the federal legislation for urban renewal and redevelopment, or the laws passed by the State of California enabling cities to create pedestrian areas within downtown cores. These tools and their application need improvement before they can be fully effective.

But most of all, the architectural and planning profession will have to grow to the task at hand. This will require a new type of educational training to produce creative architect-planners who understand the profound sociological task of architecture in our time: the survival and renewal of cities on a human scale.

ON HUMANIZING HUMAN NATURE

By Leon Eisenberg

A leading psychiatrist rejects the currently popular notion that man is instinctively aggressive. He finds the evidence offered unconvincing and argues further that the ways in which men theorize about themselves influence significantly how they behave. His article is abridged from *Impact of Science on Society* and appeared in an earlier version in *Science*.

Dr. Leon Eisenberg is professor of psychiatry at Harvard Medical School and chief of psychiatry at Massachusetts General Hospital. He is an editor of *The Journal of Child Psychology* and a member of the editorial board of *The Journal of Psychiatric Research*.



Human nature is not truly reflected in the currently popular image of a "naked ape," motivated by "territorial imperatives" and impelled by "aggressive" instincts. These quoted phrases are taken from the titles of recent books by Desmond Morris (*The Naked Ape*), Robert Ardrey (*The Territorial Imperative*), and Konrad Lorenz (*On Aggression*). My rejection of their "evidence" for man's ineradicable aggressiveness may seem outrageously optimistic in an era marked by a litany of violence. My dissenting view also challenges Sigmund Freud, whose illusions of civilization were shattered by the barbarities of the First World War, and who wrote in *Civilization and Its Discontents*: "The tendency to aggression is an innate, independent, instinctual disposition in man."

This debate over human nature is no mere academic exercise, of concern only to students of behaviour. The planets will move as they always have, whether we adopt a geocentric or a heliocentric view of the heavens. Planetary motion is sublimely indifferent to our earth-bound astronomy. But the behaviour of men is not independent of the theories of human behaviour that men adopt. One example may serve to illustrate this thesis.

So long as the "nature" of insanity was thought to be violent, and so long as the insane were chained, beaten, and locked in cells, madmen raged and fumed. With the introduction of the "moral treatment" of the insane at the beginning of the 19th century, violence in mental

asylums markedly abated. A century later, the "nature" of insanity was perceived as social incompetence: the sick were "protected" from stress, and the institution assumed responsibility for all decision-making. Misguided benevolence stripped the patient of adult status and generated automaton-like compliance. The result was that few patients were "cured" in our public mental hospitals. A generation ago, the concept of the therapeutic environment, with its rediscovery of self-reliance and personal responsibility as the bases for attaining competence, began to reverse the cycle of self-perpetuating hospitalization.

The Influence of Beliefs

This led to a decline in what had been a steadily rising population in United States mental hospitals, a decline that began before the era of psychotropic drugs. Do not mistake me. Psychosis is no mere social convention; it has a psychobiological existence independent of systems of belief. But its manifestations and its course are profoundly influenced by the social field in which the patient and his caretakers operate. Belief systems act no less profoundly on the remainder of mankind. The doctor's very presence relieves pain. Teachers' expectations govern pupils' performance. The citizens' confidence in the benevolence of the social order maintains its stability.

What we believe of man affects the behaviour of men, for it determines what each expects of the other. Theories of education, of political science, of economics, and the very policies of governments are based on implicit concepts of the nature of man. Is he educable? Is he actuated only by self-interest? Is he a creature of such dark lusts that only submission to sovereign authority can save him from himself?

What we choose to believe about the nature of man has social consequences. Those consequences should be weighed in assessing the belief we choose to hold, even provisionally, given the lack of compelling proof of any of the currently fashionable theories. I do not suggest that we ignore scientific evidence when it does not suit our fond wishes. Any hope of building a better world must begin with a tough-minded appraisal of the facts that are to be had. The thrust of my argument is that there is no solid foundation to the theoretical extrapolation of the instinctivists, the ethologists, the behaviourists, or the psychoanalysts, despite the special pleading that often is so seductive to those eager for a "real science" of behaviour.

Further to the point, belief helps shape actuality because of the self-fulfilling character of social prophecy. To believe that man's aggressiveness or territoriality is in the nature of the beast is to mistake *some* men for *all* men, *contemporary* society for *all possible* societies, and, by a remarkable transformation, to justify *what is* as *what must be*. Social repression is thus seen as a response to, rather than a cause of, human violence.

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Pessimism about man serves to maintain the status quo. It is a luxury for the affluent, a sop to the guilt of the politically inactive, a comfort to those who continue to enjoy the amenities of privilege. No less dangerous is the false optimism of the unsubstantiated claims that men can be basically changed and "improved" by behavioural engineering. Such claims ignore biological variation and individual creativity, and foreclose man's humanity.

What is known about the power of the social-psychological determinants of human behaviour compels the conclusion that the set of axioms for a theory of human nature must include a Kantian categorical imperative: men and women must *believe* that mankind can become fully human in order for our species to attain its humanity. Restated, a soberly optimistic view of man's potential (based on recognition of mankind's attainments, but tempered by knowledge of its frailties) is a precondition for social action to make actual that which is possible.

From Science to Ideology

Some readers may object to politicizing what should be a scientific discussion. My contention is that it is necessary to make overt what is latent in treatises on the "innate" nature of man. Consider, for example, Konrad Lorenz. Surely, those who have been charmed by his film of himself leading, like a mother goose, a brood of greyleg geese about the farmyard will recoil from identifying his works as political. What is political about inborn schemata, innate releasing mechanisms, species-specific mating patterns, and the like? A great deal, as his own early writings about "racial purity" make clear, when such concepts, of dubious applicability even to animal behaviour itself, are transposed directly to man without attending to species differences and to levels of descentance.

My position should not be misconstrued as condemning the study of comparative psychology or the search for biological determinants of human behaviour as though such efforts were inherently racist. What I do inveigh against is the formulation of pseudo-scientific support for *a priori* social ideologies that are projected onto, not "found" in, nature. Such pseudo-science ignores species differences and phyletic (or descentancy) levels and misrepresents analogy as homology or equivalence. For example, attack behaviour can be observed in organisms as varied as insect, bird, carnivore, ape and man. In the insect, it may be triggered by territorial defence, but only during the breeding season; in the carnivore, by prey, but only if the appropriate internal state of arousal is present; in the ape, by the appearance of a predator, if escape routes are unavailable and if the troop is threatened; and in man, by a mere verbal slur, if the social context and prior individual experience indicate attack as the socially appropriate response.

Dangers in Comparing Behaviour

This kind of observation in divergent species of similar behavioural outcomes that fit the generic label "attack" justifies no conclusion about an underlying aggressive instinct. What is needed is a detailed study of the conditions evoking, and the mechanisms governing, the behaviour of each. Otherwise such "explanations" only concretize a descriptive label that has been indiscriminately applied to markedly different levels of behavioural organization, as though naming were the same as explaining.

Indeed, reports on animal behaviour fail to support the concept of an aggressive instinct as an independent motivational force analogous to hunger. That is, there is no predictable periodicity, no measurable changes in internal conditions (such as glucose concentration in the blood), and no evidence of a "need" to attack in the absence of provocative stimuli. This is not to deny that hormones, notably androgens, may have a profound impact on the probability of a fight rather than a flight response in high organisms. The characteristics of the species, the genetic endowment of the individual organism, its prior experience, and the immediate stimuli — all of these interact to produce the behavioural outcome. Similar outcomes may result from quite different underlying mechanisms; meaningful comparisons become possible only when the mechanisms have been identified.

Examples could be multiplied. At the most general level, the problem stems from a purposive orientation: Behaviour is explained by its outcome, rather than by an analysis of its sources. The cause is assumed to exist preformed in the organism as an instinct or innate pattern of behaviour. But where is it, when does it appear, and how does it come into being? Not even the most ardent instinctivist would any longer argue that the "instinct" for aggression or courtship rituals or nest-building is *in* the fertilized egg. Yet it is confidently asserted that it must have been precoded and ready to go because it appears without any apparent requirement for prior learning.

Let us agree: behaviour, like structure, is under genetic control. Animals of two species, reared in an identical environment, will none the less behave differently. The argument for innateness — in the sense of an inherited component — is compelling when the distribution of a given characteristic in an offspring generation can be predicted from knowledge of its distribution in the parent generation and the pattern of mating in that generation.

Biochemical Mechanisms

The genetic evidence, however, does not warrant the other sense in which innate is used — that is, developmental fixity, an imperviousness to environmental influences. Environment influences development by mechanisms that need have nothing to do with learning. For

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example, certain mutations in the wing and eye structure of *Drosophila* are temperature-sensitive; if the eggs are maintained at 18°C, the wing or eye develops normally, despite the presence of the mutant gene. This is hardly "learning," but it is evidence that the expression of a genetic characteristic can be modified by the environment, in this instance by temperature. Now that investigators have discovered an array of such factors, we can move ahead toward identifying the biochemical mechanisms underlying the action of genes.

Man's biological equipment is now, more than ever, an essential topic of study. The spread of our species and the rapid multiplication of our numbers during the past five million years attest to the adaptability of that biological equipment to circumstances that did not exist when it was elaborated. It is becoming painfully evident that the environmental changes we have wrought in recent decades threaten our continuing survival under conditions of an exponential rate of population growth. It now becomes necessary to ask: How adaptable is man? Is mere perpetuation of the species, without concern for the quality of life, a sufficient criterion for man, even if it has been so for nature? Man's intelligence permits him the conscious choice of goals and so differentiates him from the rest of animate existence.

Genes and Language

How, then, to discern the nature of man? Two general approaches suggest themselves — the comparative and the developmental. In the first, we compare and contrast the characteristics of men and women in the diverse societies that people this planet in the hope of extracting common denominators that express man's "essential nature." In the second, we study the interaction between the infant and his social and biological environment as he grows to adulthood, to discover the role of environment.

One trait common to man everywhere is language. In the sense that only the human species displays it, the capacity to acquire language must be genetic. As Noam Chomsky of Harvard University has pointed out, among the unique aspects of human language-learning are the child's ability to infer syntactical rules from a limited set of language samples and, in consequence, his extraordinary capacity to generate grammatical sentences that he has never heard. The language he speaks is determined by the language he hears, but the capacity for language must be a consequence of the genetic programming of brain networks as these respond to maturation and experience.

Languages, in so far as they have been studied, appear to share fundamental structural characteristics, a universality that argues for an as-yet-to-be identified basis in common structures in the central nervous system. Recall the example of the white-crowned sparrow, which, though it must learn its song, is structured in such a way that

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its neural networks respond only to a restricted set of external harmonic sequences — the song of its own species. The data of linguistics suggest the possibility of a similar restriction on the form of language and the nature of grammatical structures; they imply limited variability in the neural schemata underlying language structures. Further refinement in our knowledge in this field may yet enable us to propose models of neural mechanisms which must then be sought experimentally.

If language be one of the common features of human culture, even more remarkable are the diverse behaviours that cultures shape and are shaped by. What is labelled masculine in one culture and ascribed to the nature of maleness is regarded as feminine in another. Children are permitted uninhibited sexual expression and yet become monogamous adults in one culture; in another, pre-adult sexuality is heavily censured, whereas adult monogamy is privately violated while it is publicly proclaimed. Child care may be the responsibility of the nuclear family or of a large group. The same Netsilik Eskimos who are loving and devoted parents can allow a female infant who is not "spoken for" in a pre-arranged marriage to die unattended and ignored if she is not given a name and is thus, by definition, not yet human.

Is Violence Innate?

The phenomenon of war is unknown to one society, appears in a second only under environmental stress, but is a lethal game without apparent material benefit in a third. Indeed, if we were to permit ourselves the argument that the more primitive the society, the more true to man's original nature the behaviour displayed therein, we should have to conclude, as did Professor M. Sahlins, that "war increases in intensity, bloodiness and duration... through the evolution of culture, reaching its culmination in modern civilization." However agreeable, the argument for the pacific character of natural man, uncorrupted by the social order, is inadmissible. Culture is as complete and complex in contemporary hunting and gathering tribes, despite their primitive technology, as it is in our own — man is man only in society.

What is striking in this very partial inventory is the remarkable diversity of the human behaviour evoked by various but viable cultures. If we explain the murderous raids of Brazilian Indians on the basis of an innate aggressive instinct, we shall have to invent an involved theory of repression, reaction formation, and sublimation to account for the peacefulness of the Eskimos. Would it not be far more sensible to begin with the assumption that men are by nature neither aggressive nor peaceful, but rather are fashioned into one or another as the result of a complex interaction between a widely, but not infinitely, modifiable set of given biological conditions and the shaping influences of the biological environment, the cultural envelope, and individual experience?

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The very ubiquity of violence in "civilized" society, however we explain its genesis historically, guarantees that children are surfeited with opportunities to learn violent behaviour. The child sees that violence pays off. He is provided with adult models of violent behaviour with whom to identify. Violence as an appropriate response to the resolution of inter-group conflict is sanctioned by national leaders. When violence is sanctioned, it will increase. Learning may not account completely for human aggression, but the social forces in contemporary society that encourage its development are so evident that the recent preoccupation with hypothesized biological factors seems excessive and far-fetched.

Maintaining Psychic Integration

Emphasis on the very marked differences among cultures may obscure what has been, until recently, a conservative tradition within each. Children reared within a particular value system could expect to complete their days within that system. Values now change so rapidly that what a child is taught by his parents may no longer be functional when that child becomes an adolescent, let alone an adult.

However wide the range of behaviours man can exhibit — evidenced by the comparison of one society with another — the task of developing adaptive attributes is very different when radically changed behaviours are required within an individual's lifetime rather than over the history of a people. The question now becomes, not how malleable is man, but how much change can a man undergo and still maintain his psychic integration?

Here we lack empirical data. There is no precedent for such rapid change. We confront the fundamental relevance of studies of child development. In a stable society, the price demanded by acculturation may or may not have been burdensome, but clearly it was bearable, or else that society would not have perpetuated itself. Studies of child development were important even then, if only to learn how to mitigate those burdens. But if we are to enable our children today to cope with a world whose present shape we barely comprehend and whose future configurations we can only guess at dimly, then we are embarked on an enterprise that is the very keystone of the sciences of survival.

I will forego detailing what we already know and ignore at the peril of the new generation: that the rapidly growing brain of foetus and infant is excruciatingly dependent on the adequacy of its nutrition. Surely, no further amassing of scientific facts is needed to justify international commitment to the protection of the unborn and the newly born by providing adequate food to mothers and infants. What has become equally evident is that the nutriment the growing brain requires includes feeling and knowledge as well as food. The extraordinary dependence of the human young upon adult care and caring provides

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both an unparalleled opportunity for mental and emotional development, and a period of vulnerability to profound distortion by neglect. Infants in orphanages lag markedly in development, despite normal food intake, if denied a responsive human environment.

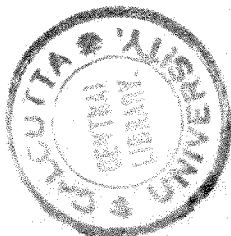
There are indeed gaps in our knowledge of this early development sequence. Just how much stimulation is optimal, just what balance is to be struck between gratification and denial, just what is the best mix between social interaction and time to be alone? Yet the outlines are clear enough to allow no excuse for what we permit to befall defenseless children, who suffer from the harm we visit on their parents.

The Precondition for Survival

We have done least well at the task of encouraging the development of humane values based upon the recognition that we are a single species. The idea of brotherhood is not new, but what is special to our times is that brotherhood has become the precondition for survival. It may have sufficed in the past to spur a child to learn for the sheer satisfaction of his own success. If we have listened to what our students are telling us, learning for personal embellishment or for the acquisition of virtuosity no longer satisfies a generation intensely aware of injustice and impermanence. Learning must become a social enterprise, informed by concern for others.

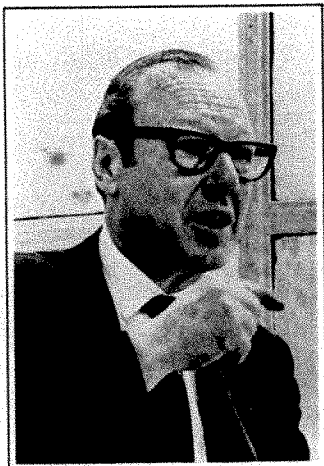
This it can become. Man is his own chief product. The infant who discovers that he can control the movements of his own fingers transforms himself from observer into actor. The child who masters reading unlocks the treasury of the world's heritage. The adolescent who insists upon a critical re-examination of conventional wisdom is making himself into an adult. And the adult whose concern extends beyond family and beyond nation to mankind has become fully human.

By acting on behalf of our species we become men and women. The study of man takes its meaning from involvement in the struggle for human betterment. The optimism about man's potential I urged at the opening of this essay is not the self-comfort of reading history as a saga of progressive liberation which will one day be complete. It matters dearly whether that day comes sooner or later. And whether it comes at all is not determined by history in the abstract but by the men and the women who make history.



THE REBELLIOUS MUSIC OF CHARLES IVES

By Harold C. Schonberg



Charles Ives was one of music's great originals. Decades before the European pioneers of modern music—such as Schoenberg, Hindemith and Stravinsky—had launched their attack on traditional harmonic styles, Ives was quietly experimenting with microtonalities and new chordal relationships. Only in the past two decades has this American businessman-composer begun to receive the recognition that, in Mr. Schonberg's opinion, his explosive, rebellious, unprecedented music deserves.

Harold C. Schonberg is the senior music critic of *The New York Times*, where his breezy but erudite columns won him the Pulitzer Prize in 1971. His books include *The Great Conductors* and *The Lives of the Great Composers*. His article is excerpted from *The New York Times Magazine*.

There is such a thing as a natural baseball player, a natural pianist, a natural cook, a natural dancer. There is also such a thing as a natural avant-gardist, and Charles Edward Ives, who was born in 1874 and died in 1954, was one. From the very beginning, he was a natural musical rebel, a complete, uncompromising individualist who despised conventional thinking and conventional sounds. He would have loved to have been born in some future century, "when the school children will whistle popular tunes in quarter tones — when the diatonic scale will be as obsolete as the pentatonic now is."

Ives spent most of his lifetime in business, running the most successful insurance agency in America, composing in his spare time a great quantity of incredibly novel, complicated, gratingly dissonant and curiously evocative music, almost none of which was published and little of which he ever heard played in public. It was not only the most unusual body of music ever composed by an American; it was probably the most unusual body of music composed by *any* musician in history.

Consider when it was written. It was the turn of the 20th century. Stravinsky had not appeared, and the outstanding living avant-gardists were Debussy in France and Scriabin in Russia. In America there was activity but nothing of importance. The then-respected American composers were writing symphonies, sonatas and shorter

works in the most approved academic European style. Virtually all of those composers had been trained in Germany.

But Ives! Living in Danbury, Connecticut, he was at that time composing music in crazy polytonalities and polyrhythms, near-total dissonance, even occasional flights into aleatory (or improvised) music. He used tone clusters, unconventional forms, and his music was of unparalleled density, complexity and technical difficulty. It was also a music that drew unto itself the American heritage going back to colonial times—a grab bag of gospel hymns, popular American music, ragtime, patriotic tunes from “Yankee Doodle” on, work songs. The ear was jarred by quarter tones, amelodic figurations, microtonalities, wild leaps, brand-new chordal relationships and a concept of counterpoint that seemed to break every rule in the book. Name it and it was there before the giants of the European avant-grade—Stravinsky, Bartók, Schoenberg, Hindemith and Milhaud—had appeared on the scene.

No wonder musicians of the day were appalled and even frightened when exposed to this kind of writing. Not that many did hear it. Ives worked alone, completely divorced from the musical establishment, turning out music that nobody wanted to hear. Since he never pushed his music, it remained unheard. There was the time a German violinist visited Ives and started to read through the First Sonata. The poor man never got past the first page. “This cannot be played,” he kept saying. “This is awful.... It is not music, it makes no sense.” Sometimes even Ives himself wondered if he was crazy. “Are my ears on wrong?” But he could not compose safe, easy music; he was not that way. “I can’t do it—I hear something else!”

An Unconventional Heritage

What he heard was derived, to a large degree, from his remarkable father. It might be, as his biographer, Henry Cowell, has suggested, that Charles Ives throughout his life composed the kind of music his father would have liked to have written. George Ives, who taught music and conducted a band, had a curious, questioning kind of mind. Like his son, he heard something else. He was experimenting with microtonalities in the 1870’s and actually built strange instruments that produced even stranger sounds, to the vast merriment of his good neighbors. He was bored with “book” harmonies and melodies. His ear delighted in strong and unconventional sounds. “You won’t get a heroic ride to Heaven on pretty little sounds,” he once said.

It was not that he discarded all orthodox rules. His theory was that rules must be broken, but that they cannot be broken until you know exactly what it is you are breaking. He started Charlie in music when the boy was five, giving him plenty of Bach. But he also exposed the boy to a different kind of ear training. He would, for instance, make him sing

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a popular song in one key while accompanying him on the piano in a different key. "This," Ives said later in life, "was to stretch our ears and strengthen our musical minds." No wonder Charlie grew up with an ear receptive to polytonalities and other discordant combinations.

From his father Charlie got a working knowledge of the piano, violin and cornet. At 12 he was playing the drums in his father's band. At 13 he was composing and he also played the organ at a Congregational church in Danbury. His compositions already were wild. At 15 he composed a set of variations for organ on the patriotic anthem, *America*, and one variation put three keys together. In 1894 Ives entered Yale University where he studied music with Horatio Parker, one of America's most eminent composers.

Businessman and Composer

The point is that Ives was not an untrained musician piping his native wood notes wild. Between his father and Parker, Charles Ives had a solid, traditional background, and could have written fugues, symphonies and sonatas with the best of them. He would have none of that. He also wanted to earn a living. And so, after getting out of Yale, he went into business. As Ives later explained the decision:

Father felt that a man could keep his music interest stronger, cleaner, bigger and freer if he didn't try to make a living out of it. Assuming a man lives by himself, and with no dependents, no one to feed but himself, and is willing to live as simply as Thoreau, he might write music that no one would play prettily, listen to, or buy.

But—if he has a nice wife and some nice children, how can he let his children starve on his dissonances.... So he has to weaken (and if he is a man he *should* weaken for his children) but his music (some of it)—more than weakens—it goes "ta-ta" for money. Bad for him, bad for music.

So Ives came to New York and founded a vastly successful insurance agency. Ives saw nothing unusual in his way of life. He said that to an insurance man there is an average man, "and he is humanity." In business he found a fullness of life. "My work in music helped my business, and my work in business helped my music." One way his work in business helped his music was that he could afford to publish some of his own music himself, which he did, bringing out a book of songs, the *Concord* sonata, and helping underwrite publishers of avant-garde music. Ives did not sell his own publications. He gave them away to anybody who requested a copy.

He continued playing the organ in churches. But, most of all, Ives composed—in the evenings, on weekends, during summer vacations. He developed into a reserved man who shunned publicity. He was a Yankee individualist nourished on his beloved Emerson, Thoreau and the other transcendentalists: a tough, determined, sometimes prickly,

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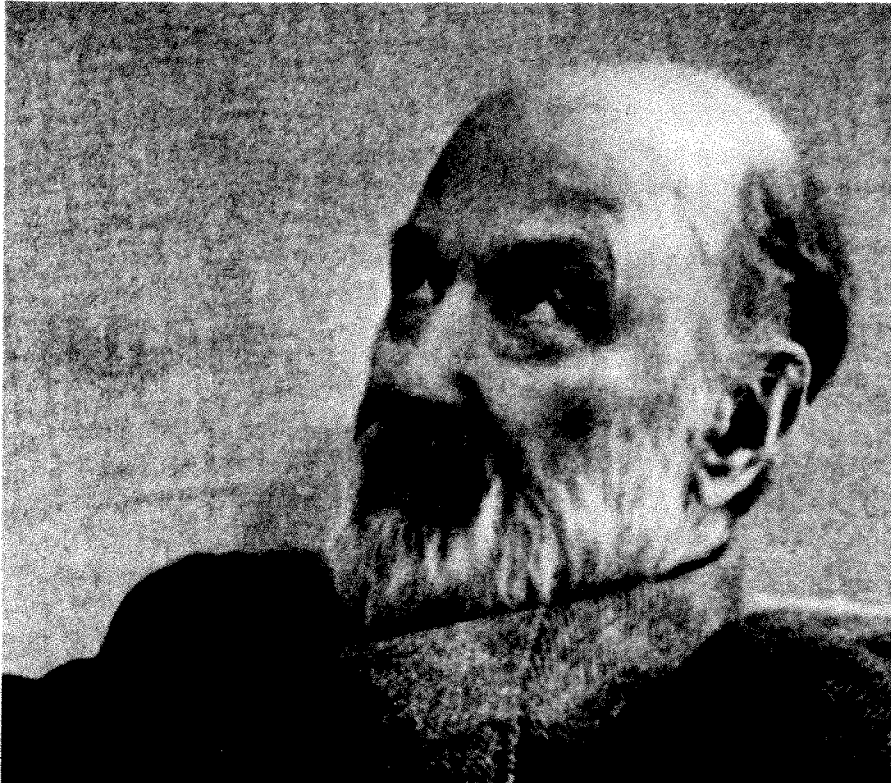
highly intelligent man who was very much a loner and made little effort to publicize the music he was composing steadily from about 1895 to 1918.

For years there was little of moment in Ives's life. "It just so happens that I felt I could work better and liked to work better if I kept to my own music and let other people keep to theirs." He did not go to many concerts, and when he did he was bored. His nervous system demanded something much more rugged than the sweet sounds produced by the great virtuosos and ensembles. He once went to a Kneisel Quartet concert and found it to be "a whole evening of mellifluous sounds, perfect cadences, perfect ladies, perfect programs, and not a dissonant cuss word to stop the anemia and beauty during the whole evening."

Manner vs. Substance

In reality, there was very little music that he did like, apart from Bach and Beethoven and, to a lesser extent, Brahms. He had nothing but contempt for what he called music of manner, as opposed to music of substance, and most of the repertory was to him mannered music. He did not care for Mozart, whom he considered "effeminate." Wagner helped "emasculate" art. He did not care for Haydn, Mendelssohn, Tchaikovsky, Gounod, Massenet. They were composers who produced

Charles Ives: A natural musical rebel and uncompromising individualist.



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drug-like, oversweet, habit-forming sounds that did not toughen the musical muscles. Debussy needed more Thoreau in him; he was "the city man with his weekend flights into country esthetics," and his eternal chords of the ninth and eleventh were beginning to sound "slimy." Around 1920, he heard part of Stravinsky's *Firebird* and identified it with the music of Ravel. Both were "weak, morbid and monotonous." One of the few contemporary composers he could listen to was the American, Carl Ruggles, and when he heard the tone poem *Men and Mountains* he excitedly called it "one of the great pieces in the history of music."

Musical Development

Ives's prime period as a composer came between 1910 and 1918. Those were the years of the four symphonies, the *Holidays* symphony (four orchestral pieces celebrating American holidays, that were put together to form a "symphony"), the two string quartets, two piano sonatas (including the monumental *Concord*, finished in 1915), the *Tone Roads*, *Three Places in New England*, and a quantity of remarkable songs, choruses, piano and miscellaneous orchestral pieces. (Many of these are still in manuscript.) From 1911 to 1916 he occupied himself with a monumental project—his *Universe* symphony. He never finished it, just as Scriabin had never finished his *Mystery*, an even more ambitious work that was to encompass all of the arts and religions. For in 1918 Ives had a serious cardiac illness and never again was in the best of health. He stopped composing at that time, and in 1930 retired from business. On May 19, 1954, he died at the age of 80.

Ives's development as a composer is perhaps most clearly seen in the sequence of his four symphonies. While he was a student at Yale, he finished his First Symphony (1896-98) and started his Second (completed in 1902). The First Symphony, in four more or less orthodox movements, recalls Beethoven, Dvorak, Brahms. It bears the relationship to his later works that Stravinsky's early E flat Symphony bears to his later works—a tryout, an "official" piece, a bow to the establishment.

But the Second Symphony, that sweet and even haunting work, bears the impress of what Ives in his maturity was going to do. The last movement especially is an intoxicating bit of Americana. Ives described one part as "suggesting a Steve Foster tune, while over it the old farmers fiddled a barn dance with all of its jigs, gallops and reels." The final measures are exhilarating. Ives brings together *Columbia the Gem of the Ocean*, the Army bugle reveille and, at the very end, a thumb-to-nose monster of a dissonant chord that brings the listener up with a start and then makes him chuckle.

The Third Symphony, quiet, lyric and unproblematic, dates from 1901-04 and is called *Camp Meeting*. Most of the symphony is based on

The Rebellious Music of Charles Ives

hymns. The writing is completely assured; here Ives was in complete command of his materials and his voice is his own. He had found his style, and a few years later threw everything into his remarkable Fourth Symphony of 1910-16. It is the most impressive symphonic work ever written by an American, but it was not heard in a concert hall until Leopold Stokowski conducted the world premiere in 1965.

The Fourth Symphony is a program work in the sense that Beethoven's *Pastoral* and the Mahler symphonies are program works. Ives does not paint the kind of specific pictures that Richard Strauss attempted in his symphonic poems. Rather he outlines a program that will give the mood of the work. The first movement, Prelude, is "the what and why that the spirit of man asks of life." The following movements are "the answers in which existence replies."

This is not a polished symphony. On the very first page, the solo piano is playing 6/8 meter, the orchestral piano in 2/4, the clarinets in 5/8, the bassoons in 7/4, the violins in yet a different meter, and the bass violins are moving freely, with no bar lines at all. All of this, of course, simultaneously.

What is one to make of this collage of biting harmonies, excruciating dissonances, sudden churchlike silences, sounds hurtling from all points of the compass, textures that tangle and never resolve themselves? The standards of Brahms, Mahler or any other symphonist cannot be applied. The Fourth Symphony by Charles Ives follows no system except that of a composer who has something to say and has invented a new way of saying it. And the result is one of overwhelming emotional impact and Niagara-like force.

Real Life in Music

At the turn of the century Ives was by far the most daring of all the living composers, but he was anything but doctrinaire. He had no "system," as Schoenberg was to have. "Why tonality as such should be thrown out for good, I can't see. It depends, it seems to me, a good deal—as clothes depend on the thermometer—on what one is trying to do." What Ives was trying to do was to achieve the ultimate truth in sound: an expression of what life really is about. Life is not all sweetness and charlotte russe and pretty sights and smells, and hence music should not be. Ives's concept of truth was all-embracing. A composer must be "willing to use or learn to use whatever he can of any and all lessons of the infinite that humanity has received and thrown to man, that nature has exposed and sacrificed, that life and death have translated."

He expressed his truth in a music that at first may sound chaotic, but which has its own logic after the listener becomes familiar with it. He wrote, in 1899, a piece called *A Yale-Princeton Football Game*, and conventional music could not suggest the effects Ives was trying to get into it. "In picturing the excitement, sounds and songs across the field

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and grandstand, you could not do it with a nice fugue in C." What Ives actually did in this piece was to juxtapose various elements, with several songs going on at once, as at the game. Or take his piece, *Over the Pavement*. He heard the sounds of people walking past his New York City home, the varying pace of the horses, an occasional trolley car adding its own kind of clacking rhythm. "I was struck with how many different and changing kinds of beats, time, rhythms, etc., went on together." So he put those altogether different kinds of rhythms simultaneously into the piece.

He put a lot of things into his music. One of the most frequently told stories about Ives is his experience as a boy on a Fourth of July holiday in Danbury. He heard two marching bands, playing different pieces, come together in a musical collision with a terrific clash of dissonances, and then march away, the dissonances receding. Ives was to use this effect in many of his works.

His music is terribly difficult to play. But Ives never intended that it be played exactly as notated. Meaning was much more important than execution. Technique was nothing; the Idea was all-important. Like Beethoven, who raged when a violinist's fingers came between him and his vision, Ives raged at musicians who were more concerned with smooth technique than with meaning.

The instrument! There is the perennial difficulty, there is music's limitation. Why must the scarecrow of the keyboard... stare into every measure? Is it the composer's fault that man has only 10 fingers?

The sheer difficulty of performance—aside from the sheer difficulties of listening to the results—was one reason Ives had so few performances in his lifetime. In the 30 years ending in 1929, only four conductors had seen any score of his. Over 90 percent of his orchestral music had been seen by nobody. Only one conductor, Nicolas Slonimsky, had made a comprehensive study of his orchestral music.

Recognition at Last

But, little by little, recognition came to Ives. The most important first performance came in 1927, when Eugene Goossens conducted two movements from the Fourth Symphony. Ives became part of a group of American avant-gardists that included Henry Cowell, Carl Ruggles, Wallingford Riegger and Otto Luening. Such critics as Paul Rosenfeld and Lawrence Gilman began writing about Ives's music. Slonimsky, fascinated with the man, made a specialty of *Three Places in New England* and conducted it in various European centers. Pianist John Kirkpatrick, after struggling with the *Concord* Sonata for about 10 years, gave the work its first complete performance in 1939.

All of a sudden Ives began to be known, and in 1946 he was elected to the National Institute of Arts and Letters. The following year he won

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the Pulitzer Prize for his Third Symphony (composed some 40 years previously). His first major audience triumph came when Leonard Bernstein conducted the Second Symphony with the New York Philharmonic in 1951. Mrs. Ives went to the concert and all but cried with happiness. "Why, they *like* it," she said. Ives heard the Sunday broadcast in the kitchen of his house, listening on his maid's table-model radio.

Sure enough, the pundits by 1950 were analyzing Ives's music and discovering how much he had been influenced by this or that composer. The truth of the matter was that Ives, who seldom went out, had not heard any of the music that was supposed to have influenced him. During the years he composed, he had not heard one note of Stravinsky or Schoenberg. The Boston critic Philip Hale found influences of Hindemith in Ives. When this was brought to Ives's attention, he called Hindemith "a nice German boy," but how could Hindemith have influenced him when he, Ives, had completed all of his music before Hindemith started to compose?

Music critics infuriated Ives. He called them "ladyfingers," "lady-birds," listeners who cried when they heard hard sounds; well-brought-up ladies who liked "nice" music and "nice" sounds. Mister Hale of *The Boston Herald* was "a nice and dear old lady in Boston (with pants on, often) who sells his nice opinions about music and things to the newspaper." Of the dean of American critics, W. J. Henderson, of *The New York Sun*, Ives wrote: "His ears, for 50 years or so, have been massaged over and over again by the same sweet, consonant, evenly repeated sequences of rhythms."

In addition Ives was something of a populist and spent a good deal of time thinking about politics and the American way of life. For a successful businessman he came out with some startling ideas. He visualized an America—and, indeed, a world—where nobody was rich and nobody was poor, where everybody had an equal opportunity. Long before it was talked about, he was a One World man. He could not stand jingoism. The only thing nationalism does, he wrote, is make war. "It is fostered and encouraged by the.... politicians and not the people—and it's about time we (the people) stop it."

Evoking the Past

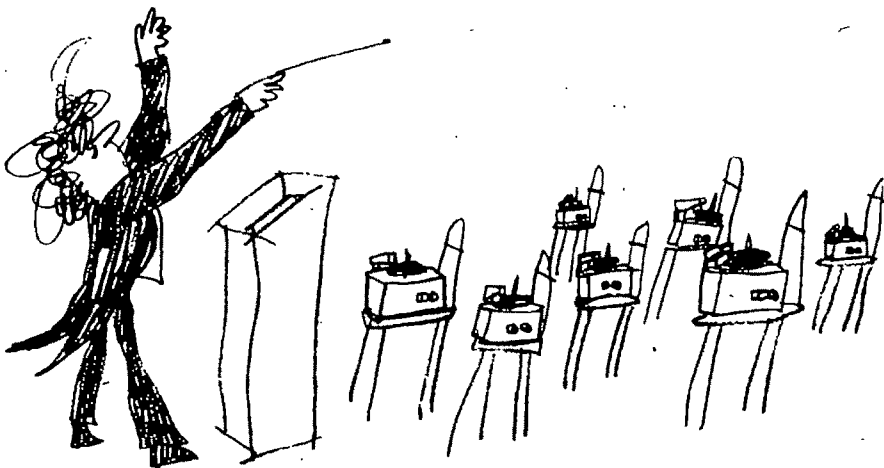
Another aspect of Ives that is somewhat passed over is the dichotomy between the kind of music he wrote and the kind of world he was trying to express. When musicians started analyzing his music in the 1950's the overwhelming majority paid tribute only to one aspect of the composer—his avant-gardism. Everybody was amazed that Ives, working quietly and alone, had anticipated nearly every modern trend, up to and including the polyorchestral groups of Stockhausen. These analyses were all focused on technique. Largely forgotten was one

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aspect of Ives that in the end may be most important of all, and that is its looking-back.

For—and this cannot be stressed too strongly—nearly every work composed by Charles Ives is a tone picture of a vanished America. His music may be as “modern” as anything ever written, and to this day it poses problems for the performer and the listener, but its essence is that of 19th-century America—an evocation of the past, of the New England in which Ives grew up. It is a sentimental vision, a fond vision of an America of farmers and simple people who went to church and sang hymns and raised families and turned out on national holidays for the marching, the band music and the festivities. The music of Ives celebrates religious revival meetings and country dances, and horses and their wagons struggling in the mud. Ever present, in one guise or other, is the transcendentalism—the search for reality through spiritual intuition—of Emerson and Thoreau.

Ives founded no school, and there are few today who write in his style. Composers after World War I were more interested in chasing after the abstractionisms of Schoenberg, Webern and Boulez. Ives, who was really a romantic through all of his avant-gardism, was respected and even admired, but he was not imitated. His music made many composers feel a bit embarrassed. They were interested in music as theory, music as structure. He was interested in music as people. Others expressed forms as a vision of life. He expressed a vision of life in odd, original, complex musical forms.



JAZZ NOTES

By Whitney Balliett

Whitney Balliett is widely regarded as the most brilliant writer on jazz in the United States. He has been a member of *The New Yorker* staff for more than 20 years and its regular jazz critic for most of that time. His columns have been collected in several volumes, among them *The Sound of Surprise* and *Such Sweet Thunder*. He has also written a book-length "profile" of Buddy Rich, entitled *Super-Drummer*. In the following article, excerpted from *The New Yorker*, he comments on some recent performances by, and books about, jazz musicians.



There is an obsessive quality in much of the experimental jazz of the 1960's and 1970's—the music once called “the new thing” and now generally called “free jazz.” It is in the work of Ornette Coleman and the late Eric Dolphy, of Sonny Rollins, John Coltrane, and Cecil Taylor, and it is in much of the material the Jazz Composer's Orchestra plays. This hectoring strain is new in jazz. Before the 1960's most good jazz has a pleasant, show-off quality, a casual “look-no-hands” lyricism. Its practitioners enjoyed doing sensational things—Louis Armstrong's 1933 solo flights and Coleman Hawkins' 1939 “Body and Soul” and Charlie Parker's 1947 “Embraceable You”—and they didn't care whether the listener understood it all, as long as he cheered. But free jazz, whether out of the unsureness that dogs experimentation or out of deep racial bitterness (free jazz is the blackest jazz there is) or sheer messianic drive, tends to bully the listener.

At least, that is what the pianist McCoy Tyner, now thirty-five, has been up to in the past several years. Tyner spent five years as a sideman baking in John Coltrane's oven, and by the time he left Coltrane most of the ingredients now rampant in his work had risen: the continually shifting modal patterns, the racing, almost glissando arpeggios, and the hammering, enfolding chords. His newest album, *McCoy Tyner: Enlightenment* (Milestone M55001), recorded at last

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year's Montreux Jazz Festival in company with the tenor and soprano saxophonist Azar Lawrence, the bassist Joony Booth, and the drummer Alphonse Mouzon, contains two records on which there are just four numbers—the three-part “Enlightenment Suite” (twenty-six minutes), “Presence” (ten and a half minutes), and “Walk Spirit, Talk Spirit” (twenty-five minutes). Despite its fervor and density, the music is fairly conventional in form. The melodies are simple (part of “Enlightenment” has a strong “Summertime” flavor), there are opening and closing ensembles, and the rhythmic patterns are clean and clear.

One hears Art Tatum and Bud Powell and the less cluttered side of Cecil Taylor in Tyner's playing, but the exact center of his style goes ceaselessly in and out of focus: keys shift like light on whirring spokes, his rhythms move ecstatically from set time to double time to triple time, his arpeggios and single-note lines seem vertical rather than horizontal, and he constantly returns to his stockpile of massive, loud-pedal chords. His playing is agitated, absolutely sure, and quite new. Cecil Taylor is an avalanche, but Tyner is a hypnotist, and it is hard to turn away from his brilliant baths of sound.

Bix Beiderbecke: Lyric Trumpeter

George Gershwin—celebrated during his life, hurrahed in countless books since, and cheered widely last year on the 75th anniversary of his birth—has long been regarded as the premier American musical whiz kid of the 1920's and early 1930's. But the sands have been shifting, and it is now clear that Gershwin was but one of four unique American musicians at that time, the rest being Louis Armstrong, Duke Ellington, and Bix Beiderbecke. Of the four, Beiderbecke has been the least understood, and for good reasons. Gershwin, Armstrong, and Ellington each realized the American dream, but Beiderbecke insulted it. He died a penniless alcoholic, at the age of 28, in 1931. He was, save among musicians, who revered him, virtually unknown during his life, having been praised just twice in print. He rebelled against his German-American heritage, and was felt by his sanctimonious family to have betrayed them. And despite his recordings, few of which accurately capture his playing, his fragile beauties vanished with him. All that has been left of Beiderbecke is a semimythical figure, cut down in bloom and canonized by a murmuring cult.

Two new books should at last put him in perspective. The first, *Remembering Bix* (Harper & Row), is a remarkable, unashamedly idolatrous memoir by the painter and writer Ralph Berton, and the second, *Bix: Man and Legend* (Arlington House), by Richard M. Sudhalter and Philip R. Evans, is a huge, slow-breathing, almost daily record of Beiderbecke's life which has been in preparation for 17 years. Berton's book, like all zealous works, is highly uneven. The first hundred pages are a plodding and largely superfluous account of his life

and times. And Berton's argument that Beiderbecke, who was awestruck by Stravinsky and Ravel and Debussy, was single-handedly struggling toward a new and unimagined American music, seems silly.

But the rest of the book is acute and affecting. It is, in the main, a reconstruction of the months in 1924 when Berton, a precocious 13-year-old, was hanging around Beiderbecke, whom he had met through his brother, the drummer Vic Berton. Beiderbecke emerges as a classic American bucolic (he was from Davenport, Iowa) who happened to be possessed by music. He rarely bathed or changed his clothes; he was absent-minded; he was a fine natural athlete; he had, like many other diffident people, a laconic sense of humor; he had little will power, and already drank an alarming amount; he loved the possible unique American pastime of horsing around; and he was wowed by learning and sophistication. But there was no foolishness in the musician. His ear was sharp and retentive, his tone summoned up bells and harvest moons, his improvisations were daring and unique, he was unfailingly inventive, and he was a brutal self-critic.

The Sudhalter-Evans book fills out Beiderbecke's misshapen life by chronicling almost every day of his highly productive stay with Paul Whitman's band in the late 1920's (long thought by the myth-makers to have been a frustrating period for Beiderbecke); his nervous relations with his family (he discovered late in his life that all the recordings he had made with Whitman and others and mailed proudly home had been stored unopened on a closet shelf); his unfailing kindness to lesser musicians; his restless relations with women; his admiration for Louis Armstrong; and his miserable, needless death. Neither book explains why such a frail vessel contained so much lyricism, originality, and imagination. But some questions have no answer.

Joe Venuti: Jazz Violinist

Beiderbecke would have been 71 this year, which is the age, give or take a few years, of the master violinist Joe Venuti, who opened tonight at Michael's Pub with Chuck Folds on piano, Milt Hinton on bass, and Joe Corsello on drums. Indeed, Venuti, a great, squat, square, bustling haystack of a man with a trombone voice and a huge Roman head, appeared in the last ten or so numbers Beiderbecke recorded.

For all that, he is an ageless man, who continues to play with a ferocity, swing, and freshness that few jazz musicians of any age have matched. His style is plunging and reckless and totally assured. He fashions frequent and enormous intervals, voluptuous bent notes, and roaring double stops. His tone can be sweet and gypsylike or rough and hurrying, and his sense of dynamics is a marvel. He loves to double the tempo and play at hat-losing speeds. He is in constant motion onstage, tucking his tiny violin under his massive chin, gazing paternally around the room, tapping his accompanists on the shoulder to

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tell them when to solo, and rocking from side to side when he gets off a beauty. He seems to know every tune ever written. Tonight we heard jubilant versions of "Honeysuckle Rose," "C-Jam Blues," "Get Happy," "Muskrat Ramble," "I Found a New Baby," and a "Sweet Georgia Brown" that went by so fast his accompanists disappeared in the dust; tongue-in-cheek musings on Liszt, "Jalousie," and "Sleepy Lagoon"; and rockaby renditions of "Laura," "Autumn Leaves," "I Could Have Danced All Night," and "I've Grown Accustomed to Her Face." They don't make Venutis anymore.

Frank Sinatra: From Pop to Jazz

Ol' Blue Eyes, enjoying his latest resurgence, gave a concert tonight in the vast, steaming vault of Nassau Coliseum, and it was a stirring event. He is singing better now than he ever has, for he has gradually become, in a startling reversal of the usual jazz-singer-to-popular-singer trek, a first-rate jazz singer. Gone is the crooning blandness he long ago absorbed from Bing Crosby, and gone, too, is the clever, oiled, synthetic way he used to put rhythm songs together. His voice has deepened and thickened, and he has become fascinated by the rhythmic possibilities Billie Holiday endlessly explored. He will, without blurring his crystal articulation, jam words and syllables together, as she did, or he will stretch his words out behind the beat, achieving the priceless legato quality that is at the heart of swinging. He will bend notes and coat others with light growls, and he will gentle his words, shaping them into hymns and lullabies.

Holding all these adventures together are his masterly sense of dynamics, his iron belief that good singing is a very serious matter, and the famous, marvellous voice—a lyrical, open-sided bel-canto instrument that now rests between a low tenor and a modest baritone. There were superb, measured versions tonight of "I Get a Kick Out of You," "Here's That Rainy Day," "When We Were Young," and "Violets for Your Furs." There were dramatic, sombre readings of "Send in the Clowns" and "My Way." And there was a tough, exhilarating rendition of "That's Life," whose semi-autobiographical up-and-at-'em lyrics he obviously relishes. Although Sinatra worked in the round, he remained effortless, spinning in a slow-as-Earth motion that allowed every one of us to feel, no matter how briefly, his radiance.

Buddy Rich: Joyous Drummer

Buddy Rich, wearing his Superman costume, has come to town. He has dumped his big band, opened a club, Buddy's Place, at Second Avenue and 64th Street, decorated it with pictures of himself, and stocked it with a seven-piece group made up of Sonny Fortune and Sal Nistico on reeds, Kenny Barron on piano, Jack Wilkins on guitar, a fender bassist, a conga drummer, and himself. The band is sleek,

musicianly, driving, and, apparently at Rich's behest, very loud. It is a pile driver, a rock-crusher, a blithering explosion. Four or five numbers tonight put one wistfully in mind of some angelic minutes that took place during a concert Rich gave seven or eight years ago on Riker's Island; feeling that he wasn't reaching his audience, he picked up his wire brushes and did a funny, delicate, dancing duet in "Green Dolphin Street" with his pianist, John Bunch. That whispering, joyous performance brought the house down.

Duke Ellington: Two Celebrations

The jazz repertory mills, grinding off and on since January, have got going again, and their subject, not surprisingly, has been Duke Ellington, who is 75 today (April 29, 1974). The first attempt to bottle the Master's music for posterity was made early last week in Washington, at a Smithsonian Jazz Heritage concert given by Gunther Schuller and the New England Conservatory Orchestra. The second was made a few days ago in Carnegie Hall, by George Wein's New York Jazz Repertory Company. Schuller, who is head of the New England Conservatory, is an Ellington scholar, and he took the puristic approach. The orchestra, made up of 16 Conservatory students, played note-for-note transcriptions (solos included) of 14 Ellington records, some of them well known ("Cotton-tail," "Jack the Bear," "Koko," "Reminiscing in Tempo"), some less well known ("C-Jam Blues," "Moon Mist"), and some all but forgotten ("Azure," "Subtle Lament," "Blue Light"), and by and large it played them well—particularly the ensemble passages. The lapses were predictable: most of the transcribed solos sounded awkward and chunky, and there were persistent rhythmic problems that were accented by drab drumming. The best thing about the group was the way it illumined various aspects of Ellington's ingenuity—his weird, atonal, futuristic piano solo in "Clothed Woman"; his fine hide-and-seek scoring, especially in "Koko," "Dusk," "Subtle Lament" (a lovely clarinet alto-saxophone and soprano-saxophone voicing), and "Carnegie Blues" (the trombone trio and the baritone saxophone calling back and forth); the grace and deceptive simplicity of almost every piece; and the revelation, in "Reminiscing in Tempo," that he had been listening to George Gershwin.

Schuller firmly believes that this is the best way to preserve Ellington (the note-for-note transcriptions were the result of a dismaying discovery on his part: much of the early printed Ellingtoniana has disappeared or been destroyed); but the Ellington *œuvre* contains his melodies, his scoring of them, his piano playing, and his band, and when anyone else plays his music it invariably sounds Xeroxed. All the Ellington notes were there in Washington, but only a few of them had the right flavor. After Ellington and the scores of musicians who have worked for him are gone, the chief evidence we will have of how he played his

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music, how he brought it to its unique completion, will be his available recordings, which at best are as fallible as photographs.

The New York Jazz Repertory Company's Ellington celebration was a big, feasting, we-love-ya-Duke show, which went like this: the Billy Taylor trio wandered around through five Ellington numbers; Brooks Kerr, that admirable Ellington anthologist and mimic, resurrected "Bird of Paradise" (1924) and "Soda Fountain Rag" (1913), and was joined by such Ellington graduates as Sonny Greer, Russell Procope, Joya Sherrill, and Ozzie Bailey; Stan Getz and Jimmy Rowles performed intricate duets in "What Am I Here For," "Serenade to Sweden," and "Take the A Train"; Bob Wilber led an eight-piece band that included Pepper Adams, Taft Jordan, and Quentin Jackson through such small-band marvels as "Subtle Slough," "Echoes of Harlem," "Love in My Heart," and "Junior Hop," and the group summoned up with aplomb the timbres and accents of Cootie Williams, Johnny Hodges, and "Tricky Sam" Nanton; the Ruby Braff-George Barnes quartet ruminated eloquently in "Just Squeeze Me" and "It Don't Mean a Thing If It Ain't Got That Swing"; and a big band, led by Sy Oliver, played nine Ellington numbers, among them "Birmingham Breakdown," "Boy Meets Horn," "Ring Dem Bells," and the insuperable "Main Stem."

* * *

Postscript: The Ellington repertory concerts reviewed above had an eerie, too-soon quality, for at the time Ellington had already been in a hospital for some weeks with a "respiratory ailment." The ailment turned out to be terminal cancer, and he died early on May 24th. The first radio reports described him as a great jazz musician and band-leader, and later ones were amended to "a great American composer." He would have appreciated that, for he disliked the confining word "jazz," and, indeed, he spent his life creating a new American music—a music that George Gershwin, among others, first dreamed of 50 years ago. One's initial reaction to his death is not despairing. This glorious and extraordinary man lived as complete a life as any man of his century, and he fashioned an entire self-sustaining musical world. It is a cheerful, ingenious, unique world, and he gave it freely to us, and we shall have it as long as music lasts.



BOOK REVIEWS

U.S. FOREIGN POLICY

By Charles Frankel

Charles Frankel, professor of philosophy at Columbia University, is the author of *High on Foggy Bottom: An Outsider's Inside View of the Government and Pleasures of Philosophy*. He was formerly assistant secretary of state for cultural and educational affairs. His review is reprinted from The New York Times Book Review.

The Imperial Republic: The United States and the World 1945-1978. By Raymond Aron. Translated by Frank Jellinek. New Jersey: Prentice-Hall. 339 pp.

Raymond Aron is an institution in France. The holder of one of his country's most distinguished professorships and the author of notable books on philosophy, intellectual history, sociology, political science and the theory of international relations, he is also a formidable commentator on current events whose columns in the newspaper *Le Figaro* exercise a considerable influence on educated opinion. A judicious and informed observer of the United States, Aron's appraisal of America's relation to the rest of the world over the past three decades is bound to be read with high expectations. *The Imperial Republic* more than fulfills them.

What have we Americans been up to since World War II? Did we create the Cold War? Are we now in the process of dismantling, as best we can, a policy of catastrophe? To those who

like to think about the world in terms of pure good and pure evil, Aron's answers to these questions will be disappointing. As he himself says, such people may "be outraged by a book that is not, in fact, concerned with grounds for outrage and in which there are neither villains nor heroes."

Indeed, Aron's fundamental concern is to show that the proper questions are more complicated than those that begin this paragraph. While nothing is absolutely determined in international affairs, nations normally do not invent policies out of whole cloth, or even out of the internal dynamics of their own systems. They make them, Aron shows, within the options forced on them by international history.

Emergence of the Cold War

In his account, a "Thirty Years War" took place in this century between 1914 and 1945. There emerged out of it two powers whose actions or inactions had immediate impact on people everywhere. One was the Soviet Union, historically and ideologically opposed to the reinstatement of the old concert of established European powers that had dominated international diplomacy. The other was the United States, possessing a tradition of suspicion towards entanglement in the interstate system of permanent negotiation and balancing of interests.

In the background were masses of people in the underdeveloped nations, heterogeneous in religion and culture,

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half in and half out of the industrial system, guided and aroused by leaders undisposed to accept a continued state of subservience and alien rule. In the foreground were the industrial nations of Japan and Western Europe, dispirited, economically crushed, insecure psychologically and politically, and dependent entirely on a rapid revival of a transnational economy. The Cold War was the product, as Aron tells the story, not of mistakes or provocations or a missionary spirit, though none of these, of course, were entirely absent from the scene, but of a situation in which two outsized and ill-prepared nations with opposing interests and perspectives were called upon to share power.

Imperial, Not Imperialist

So, undeniably the United States has played an "imperial" role in the last quarter-century. It has been the principal guarantor of the stability of European borders, of the psychological and political security of Western Europe and Japan, and of the transnational flow of people, goods and currencies in those spheres of the world open to the more-or-less-free market. But the word is "imperial" not "imperialist."

It is not within the usual meaning of "imperialist," as Aron notes, to spend billions to aid countries like Japan and Germany that have become America's most serious economic rivals. While there have been spasmodic forays into "imperialism" in United States' relations with the Third World—he cites the Cuban Bay of Pigs and the Dominican Republic interventions as examples—the word is useless in describing these relations as

a whole. In my judgment Aron shows compellingly that the word "imperialist" is too simplistic, too anachronistic, too moralistic to illuminate the complex and ambiguous facts.

But what about Vietnam? Aron, who was almost the first influential Frenchman to speak out openly against his government's efforts to keep Algeria in the fold, is no defender of America's Vietnam misadventure. But he shows that the war lacked even the rationality of imperialism. He believes its fundamental cause was the transformation of the doctrine of containment into a kind of metaphysical essence forbidding a communist gain of territory anywhere—in his words, "the growing tendency to substitute symbol for reality in the discrimination of interests and issues." I believe he is right. Unhappily, spokesmen for "realism" and "the responsibilities of power," who provided the rationale for the war, were rarely realistic enough. They mistook abstractions for substantial things and did not measure the exorbitantly cruel means against concrete and reasonably predictable outcomes.

Economic Diplomacy

Approximately half of the book is devoted to the economic impact of the American colossus on the world. After an analysis remarkable for its many-sidedness, Aron concludes that no single aim dominated U.S. economic diplomacy in the years after World War II. Nor does he believe that the aims or interests of the great multinational companies, largely American-controlled, which have become an essential element in the world market, can be construed "as the inner secret

of inter-state diplomacy.”

It is in U.S. economic relations, perhaps even more than in its political-military affairs, that Aron sees the possibility of future trouble. The United States, he thinks it highly probable, will not have the influence in the next 25 years that it has had in the past. If it withdraws in a sense of guilt or weariness, it may fall into policies of protectionism; more likely it will pursue its trade and monetary policies in a careless or aggressive mood. Multinational companies are not easily governed by national governments—their spreading influence, combined with the Eurodollar and an unconcerned America, could mean the erosion of economic sovereignties and the growth of even bitterer forms of anti-Americanism.

Presidential Power

Aron is also concerned that, as a reaction to Vietnam and Watergate, the Congress will reduce the powers of the Presidency in foreign affairs. As a European with a memory, he does not look on such a prospect with serenity. Indeed, though he admires Secretary of State Henry Kissinger's diplomatic skills and “Old World realism,” he has no confidence that the United States is developing a coherent policy for the future, or is doing more than some quick stitching and patching of the present fabric of its relationships.

I am not sure Aron fully comprehends (or perhaps the word is “sympathizes with”) the feelings of Americans who believe that the growth of Presidential power in the realm of foreign affairs has carried with it a rending disruption of a proper domes-

tic scheme of things. Nor does he seem to recognize what I think is a necessity for an effective foreign policy focused on more than immediate events or theatrical summit parties—honest, close and continuing consultation with the Congress. It is the only manner in which, I think, authority can be restored to the decisions of the Chief of State in external affairs.

I wish, too, that Aron had found room to discuss the important and unduly neglected area of cultural relations in the international arena. But he explicitly recognizes the importance of this subject, and, as he says, it would take another book.

Meanwhile, we must be grateful for this one. It restores perspective. It is the book by an outside observer that we Americans have needed to help us get over our present mood of anguished breast-beating or angry breast-thumping; of apology or self-vindication; of proclamation that we have been wicked, beginning to end, or of announcement that we have never been wrong and that it was only our will, but never our intelligence, that has failed.

Aron has a classic mind, lucid, proportioned, able to use whatever material is pertinent to the subject he is examining, and armed with a sense of history and human limitations that protects him from the shibboleths of the era. Refracted through the cool, antiseptic light of *The Imperial Republic*, our foreign relations over the last generation can be seen, I believe, essentially for what they have been. I know of no book on the subject that is saner, more worldly yet humane, less intellectually compromising or compromised.

SOLZHENITSYN AS WITNESS

By Timothy Foote

Formerly a foreign correspondent in Europe, Mr. Foote is now senior editor of *Time*, in which this review originally appeared.

The Gulag Archipelago Vol. 1. By Alexander Solzhenitsyn. New York: Harper & Row. 660 pp.

People everywhere have followed Alexander Solzhenitsyn's distant struggle with the Soviet government and his final, forced hegira into exile with the kind of awe that might attend the trial and burning of Joan of Arc. He is the world's most celebrated writer. *The Gulag Archipelago*, with massive printings now pouring into book clubs and bookstores all over the United States, seems about to become his most popular work.

The going *literary* view, by contrast, is that Solzhenitsyn's fame depends on politics more than art, that he is a great man, but not a great writer. That is probably a shortsighted judgment. In America it will be necessary to wait for first-rate translations of his books, since each succeeding volume (*Gulag* will be no exception) stirs more than the usual storm about inaccuracies and betrayal of spirit that mars most translations. More important, one will have to see completed the already vast and elaborate mixture of fact and fiction through which he is attempting to restore to his countrymen the history of Russia since 1914. Solzhenitsyn is also clearly working on the creation of a rich, in-

terlocking literary world that will revive a 19th century conception of man, shorn of his fond hopes for progress, but still a creature endowed with conscience and a soul who has need for piety, loyalty, continuity and simplicity in order to survive.

The Gulag Archipelago was written expressly for Soviet readers. Again and again the author says, in effect: We thought the Moscow purges of 1937 were more or less isolated convulsions of terror. Not so. The corruption of Soviet justice did not begin with Stalin as we were taught, but with Lenin, in 1918. Then he goes back to document the successive waves of political prisoners—from engineer “wreckers” of the Revolution and peasants caught up in collectivization right down to whole divisions of Red Army soldiers captured by the Germans in World War II and then returned to the U.S.S.R. All these, from 1918 to 1953, flowed through the ports and channels of the Gulag Archipelago, the Soviet penal state-within-a-state, whose myriad prisons, interrogation centers and slave-labor camps stretched from Leningrad to Komsomolsk and variously engulfed some 60 million souls. *Gulag* also makes clear that Soviet justice evolved in a straight line from Lenin's suggestion that the judiciary be allowed to legalize terror into a system of extrajudicial reprisal in which police, interrogators, judge and jury were all one and the “death penalty was no longer a punishment but a means of social defense.”

What kind of shock such a book must be for the Russians who manage to read it is difficult to imagine. For some, Stalin is still a hero. To most, Lenin is close to a political saint. Westerners—courtesy of cold war propaganda, a free press and honest scholarship—regard both men with varying degrees of repugnance. Even to them, much of the cruelty and stupidity will seem dreadful enough. Solzhenitsyn produces moments that are unbearable, breaking through all defenses that the mid-20th century reader is likely to have raised against being afflicted by the pain of others.

A Monstrous World

The prison world that the author depicts in most of his books is often compared to hell or a nightmare. Yet the author admits, "I have come almost to love that monstrous world." For, along with bestial cruelty and institutional torment, he found great courage and comradeship among fellow prisoners in the Archipelago. The memory of it has permanently shaped his attitude toward mankind. The "fearlessness of those who have lost everything" encourage him. "Own nothing," he counsels those who have been arrested. A food package, he warns, "transforms you from a free though hungry person into one who is anxious and cowardly.... These material things will keep you from entering the heavenly kingdom of the liberated spirit."

Shorn of hope, power, possessions, he experienced a serene vision of life. Good and evil exist, he concluded. Man knows one from another and even under terrible stress can sometimes find the courage to act upon his

knowledge. As a result, Solzhenitsyn regards moral relativism as a virulent modern disease, though he distinguishes between actions natural to man—some of them violent—and unnatural cruelties. In *The First Circle*, after a discussion of what is right and what is wrong, a peasant-prisoner named Spiridon remarks: "Wolfhounds are right, cannibals are wrong."

The various implications of these views are familiar enough. Power corrupts and so do possessions. So do pride and pragmatism. "The political genius," Solzhenitsyn writes with savage irony, "lies in extracting success, even from the people's ruin." Similar notions, passionately held, drove Tolstoy to abandon family and property and preach nonresistance as well as noncooperation with any of the institutions of society. Solzhenitsyn resembles Tolstoy in a number of ways. Courage and the willingness to share danger with comrades are among the highest virtues represented in his books—and life. Tolstoy, however, believed that men cannot shape history. In *August 1914*, Solzhenitsyn steadily tries to refute this view. He believes, besides, that men are morally obliged to fight in defense of their country. "Why did you do it?" a girl asks a boy who has just volunteered for the army, in *August 1914*. Both have been influenced by the doctrine of nonresistance. "I pity Russia," he replies.

In the Name of Ideology

So does Solzhenitsyn. His prime historic target is revolutionary ideology, because of its power to subvert private conscience, encouraging men

to see their fellow men as "insects" (Lenin's word) to be virtuously crushed for the good of the cause. It was in the name of Marxism-Leninism that the horrors of Gulag were visited upon the Russian people. The book is one of the most overwhelming attacks on the practical applications of that ideology ever written. What Solzhenitsyn urges in another remarkable document, *Letter to the Soviet Leaders*, is that the Soviet government abandon its ideology entirely. It not only has been a scourge and a failure in the past, he says, but now threatens to lead the U.S.S.R. into a war with China. But he is not very hopeful. "Human nature," Solzhenitsyn once wrote, "changes not much faster than the geological face of the earth." The author's suggestion—in *Gulag*—that the masters of the Kremlin put on trial the men most evidently guilty of the past imprisonment, torture and murder of so many millions of their coun-

trymen will probably be ignored, too.

Like environmentalists in the United States and the economists of the Club of Rome, Solzhenitsyn has also urged his country to turn away from its dream of Western technological progress. Instead, he suggests, it should create in the Northeast territory a vast community in which science might be used to create a way of life closer to the earth, to the customs of ancient Russia.

Even if little comes of his advice, history may yet judge Solzhenitsyn a success—and not merely in the realm of art. For he is surely one of those towering witnesses thrown up by history (or God) in moments of crisis to remind the world that the pursuit of material progress is no way to the peace that passes understanding. For the first time, though, that message may concern survival as well as salvation.

A BLACK RENAISSANCE MAN

By William Thomas

The reviewer teaches literature at Howard University in Washington, D.C. His review is reprinted from *The Washington Star-News*.

James Weldon Johnson. By Eugene Levy. University of Chicago Press. 380 pp.

The strong influence of three men—Booker T. Washington, W.E.B. Du Bois and James Weldon Johnson

—was impressed on nearly every aspect of Afro-American life in the first quarter of this century. Although a good deal has been written about the conservatism of Washington and the militant ideology of Du Bois, it is surprising that so little attention has been paid to James Weldon Johnson. Now Eugene Levy has offered a needed corrective in the first attempt at a critical biography of Johnson, who was born in 1871 and died in 1938.

Levy's book is both comprehensive and focused, using Johnson's public and private writings to chart his emergence as a leading figure in the early civil rights movement. Levy gives some helpful guidance to Johnson's literary output, but the greater part of the book centers on Johnson's gradual rise through the ranks of the black bourgeoisie to become in 1920 the first Negro executive secretary of the National Association for the Advancement of Colored People (NAACP), the leading civil rights organization of the last 50 years.

Like his contemporary Du Bois, Johnson was something of a Renaissance man. A trained lawyer, he was educated at Atlanta and Columbia universities. From 1901 to 1906, before a tour of duty with the State Department in Latin America, he collaborated with his brother Rosamond, writing for vaudeville and the light opera stage. Both his interest in poetry and his association with the theater turned Johnson to the study of literature. In 1912 he published a novel, *The Autobiography of an ex-Coloured Man*, which caused a great stir and remains his most widely read book.

Johnson's other major works include *Black Manhattan*, which appeared in 1930, and an eloquent autobiography, *Along This Way*. Besides nearly three dozen essays on subjects as diverse as Marxism and prosody, he brought out two volumes of verse, and an anthology of spirituals, *God's Trombones*, which was recently the basis of an evening of musical theater.

Johnson considered himself to be above all a literary man. However, Levy's account portrays him primarily as a skillful politician, whose

cultivated manner and intellectual resilience were well suited to meet the tense racial controversies of his day.

Participant and Chronicler

When he left Broadway in 1906, Johnson, a lifelong Republican, was closer politically to Booker T. Washington than to Du Bois. Although he was not a member of Washington's inner circle of advisers, he demonstrated his loyalty by turning down an invitation from Du Bois to participate in the leadership of the Niagara Movement, a forerunner of the NAACP. Afterward, under the patronage of Washington, Johnson received two Foreign Service Consular assignments. With little hope of being promoted out of the tropics by the Wilson administration, he resigned in 1913. For the remainder of his life he "divided his energies between active participation in his race's struggle to achieve equality and the role of observer or chronicler of that struggle."

The turning point in Johnson's life occurred in 1916, a year after Washington's death, when he accepted the post of field secretary of the recently founded NAACP. Significantly, his new position put him in close contact with Du Bois, the editor of the organization's monthly journal, *The Crisis*. Johnson never embraced Du Bois' socialist sympathies, but his writings and speeches during the first years of his tenure give evidence of Du Bois' steady influence. However, the strength of Johnson's opinions (and finally what made him a better spokesman than the often abrasive Du Bois) lay "in his ability to make pronouncements without tying himself to one or another of

the factions then contending for power in the black community."

Within the short span of five years, Johnson's organizational genius transformed the NAACP from a loosely knit group of several dozen New York intellectuals into a national Negro policy-making body, whose membership numbered in the thousands. As field organizer and later as executive secretary, he led a vigorous attack against the renewed wave of lynching and mob violence after the first World War. It was Johnson along with Du Bois who formulated the movement's long-standing strategy to combat racism by appealing to the conscience of white America through marches and non-violent protests and by pursuing the defense of civil rights cases in the courts.

Rising Political Influence

Levy is at his best in describing the behind-the-scenes maneuvering that surrounded House of Representatives passage of the Anti-Lynch Bill in 1920. The measure failed in the Senate, but Johnson's extensive lobbying efforts to win House approval marked the first time in the history of the United States that an independent black organization had successfully exercised political persuasion over Congress. What followed in the decade of the 1920's was a series of minor court victories that laid the groundwork for the greater legal triumphs of the 1940's and 1950's, culminating in

the Supreme Court decision of 1954 outlawing racial segregation in public schools.

When Johnson retired in 1930, the NAACP was locked into a collision course with the country it sought to change. Yet Johnson's contribution to the organization he served is clear. His work was instrumental in helping to reverse the acquiescence in segregation and disfranchisement endorsed by Booker T. Washington. Unyielding in his commitment to the idea of social integration and in his opposition to separatist programs such as Marcus Garvey's "Back To Africa" campaign, Johnson felt, perhaps naively, that white America would right itself once a mirror was held up to its wrongs. It was the task of the NAACP, he believed, to focus that mirror and hold it steady.

One must admire Levy's research and his careful telling of Johnson's life. What he fails to do, though, is bring Johnson himself out from behind the facts he has assembled. If the task of the biographer is to remove public masks in order to evince the real life they conceal, then the scholarship of Levy's study, which is impeccable, paradoxically works against him. For all of its merit, his *James Weldon Johnson* remains a web of surfaces.

To know Johnson, read his autobiography, *Along This Way*, and his psychologically revealing novel, *The Autobiography of an ex-Coloured Man*. To know about him, read this book.



PARTNERSHIP OF MAN WITH NATURE

By Del Ivan Janik

The reviewer has written for a number of American literary quarterlies and teaches at the State University of New York at Cortland. Author Gary Snyder grew up in the backwoods of the state of Oregon, studied Zen Buddhism for a number of years in the Far East, and was the inspiration for Jack Kerouac's book, *The Dharma Bums*. He has received a number of poetry awards and moved recently to the California mountains "to live so sturdily and Spartan-like as to put to rout all that was not life."

Manzanita. By Gary Snyder. Bolinas, California: Four Seasons Foundation. 32 pp.

Gary Snyder has developed his own contemporary poetry of nature, a poetry which while it does not reject humanity does challenge some of the fundamental concepts underlying Western society. Although Snyder has long been identified with counter-culture figures such as Allen Ginsberg, he represents less a counter-culture than a counter-consciousness which opposes and offers an alternative to the anthropocentric assumptions that have dominated Western man's relations with his natural environment since the Book of Genesis declared man's dominion over every living thing that moves on the earth.

To the traditional and clearly still dominant assumption that human needs outweigh the inherent worth of other living things, Snyder opposes an ethic of common sense and humility,

and recognition of the relativity of man's place within a larger natural order. "Control Burn" gives one example of how man can function as the partner rather than the master of the non-human.

Fire is an old story.

I would like,
with a sense of helpful order,
with a respect of laws
of nature,
to help my land
with a burn, a hot clean
burn.

(manzanita seeds will only open
after a fire passes over
or once passed through a bear).

A forest ranger may help the land under his care with a control burn; a poet, Snyder seems to suggest, can help his land, perhaps his nation, through the purgation and illumination of the fire of language.

The multi-cultural sensibilities of Snyder's earlier books, *The Back Country* and *Regarding Wave*, are still implicitly present in *Manzanita*, but this book marks Snyder's return to a specifically American setting and a predominately American idiom. Snyder is a serious student of Eastern philosophies, and they continue to influence his poetry; but insofar as he is part of a recognizable tradition, it is a tradition which his own work has done much to create. Snyder's poetry arrives at a focus that includes Henry David Thoreau (as a writer of prose), Robinson Jeffers, and D.H. Lawrence,

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as well as other poets such as William Carlos Williams and Theodore Roethke. These writers shared several qualities that define the counter-consciousness of which Snyder is the outstanding contemporary representative: an objectivity that enabled them to transcend the anthropocentric point of view, an ability to appreciate the non-human in and for itself, and an awareness of the interdependence of all living things.

Nature and Man

Williams once attacked the "sentimentality" of Western art—its insistence on interpreting natural phenomena in terms of their intellectual significance and emotional value. Like Williams, Snyder avoids such sentimentality; his observations of nature often appear juxtaposed with human concerns, but the two simply coexist, and the human element does not dominate. Snyder's poetry records the objective existence of both the human and the non-human, and the nature of the relations between them. His description of his family in "The Bath" has the same objectivity as his description of the manzanita bush from which this volume takes its name. Human beings are natural phenomena having neither less nor more fascination and neither less nor more right to exist than coyotes, fawns, or pine forests:

The cloud across the sky. The windy
pines
the trickle gurgle in the swampy
meadow

this is our body.

Fire inside and boiling water on the
stove

We sign and slide ourselves down from
the benches
wrap the babies, step outside,

black night & all the stars.
Pour cold water on the back and thighs
Go in the house—stand steaming by
the center fire...

A Delicate Balance

Snyder is not a conventional communitarian with and celebrator of nature who derives "inspiration" from external beauty; his understanding goes deeper. Like Jeffers and Lawrence, he is aware of man's power to affect the delicate balances of ecological systems. He knows that all living things are interrelated, and that men in modern technological societies have acted more often to upset than to further the larger natural patterns. As a result, Snyder has become more and more a poet-revolutionary committed to a change in human consciousness which might lead to a world free from the disastrous effects of the Western ethic of economic growth and human aggrandizement. "I Went Into the Maverick Bar" reveals the personal consequences of this commitment. In a small-town bar Snyder re-encounters the atmosphere that had pervaded his own young manhood—high school dances, flirting waitresses, alcoholic drinks:

That short-haired joy and roughness—
America—your stupidity.
I could almost love you again.

But in leaving, the poet realizes that this roughneck innocence is behind him forever:

In the shadow of bluffs
I came back to myself,

To the real work to
"What is to be done."

"What is to be done" has been, for Snyder, to reveal the beauty, significance, and interdependence of the things of the living world. Now, in *Manzanita*, it is often to show America how it has ignored and desecrated them.

A bulldozer grinding and slobbering
Sideslipping and belching on top of
The skinned-up bodies of still-live
bushes
In the pay of a man
From town.

Behind is a forest that goes to the
Arctic
And a desert that still belongs to the
Piute
And here we must draw
Our line.

In Snyder's earlier poetry and in the essays of *Earth House Hold* he brought the latent tradition of an environmentally sensitive literature to a purposeful self-awareness. In *Manzanita* the voice of that tradition has become more strident. The gentle humility of earlier poems is still present in "Coyote Valley Spring," "The Bath," and some others, but poems like "Steak" and "Spell Against Demons" have the disturbingly flat, tendentious ring of some of D.H. Lawrence's least successful verse. Like some of Lawrence's poems, parts of *Manzanita* show more intellectual conviction than poetic judgment. Snyder's importance as a poet, like Lawrence's and Jeffers' before him, derives not from the rightness of his ideas but from the clarity of his perceptions and the beauty of their expression.

A NOBLE ENTERPRISE

By Richard Freedman

Contemplated here is a unique book, lacking author or text. The reviewer is professor of literature at Simmons College and a regular contributor to *Book World*, where this review originally appeared.

The Nothing Book: Wanna Make Something of It? New York: Harmony Books. Unpaginated.

"Nothing will come of nothing," King Lear warned Cordelia, but he was wrong, as any minimalist artist today could tell him. "Less is more"

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is a far more appropriate rubric for our time, sinking as we seem to be beneath an ocean of printer's ink. One needn't be a committed ecologist to weep for the vast forests denuded daily to satisfy the egos of writers and the rapacity of publishers.

The Nothing Book is a heartening response to the print explosion. It is a first-rate piece of minimal art, going far beyond the plays of Beckett, the sculptures of Giacometti or the music of John Cage. At a time of dismaying slovenliness of production by most

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publishers, it has not one typographical error. At a time of outrageous prices for the shoddiest hardcover books, it costs a modest \$3. At a time when most books seek to shock on every page, its contents are austere, pure and virginal and could bring a blush to no maiden cheek. Its tone is downright anodyne.

In short, it is a reviewer's delight. Every page is blank.

The publishers claim there are 192 such pristine pages, although I must confess I haven't counted them. The dust cover carries the usual blurbs, but here they are in praise of nullity, and come from such superior blurb-writers as Socrates, Lucretius, Marie Antoinette and Ira Gershwin.

My only cavil is that having conceived and executed such a noble enterprise, the publishers then seem to have lost faith in its uncompromising nihilism. They make all sorts of suggestions as to how the book may be used. Write your own (short) novel. Keep recipes or press flowers in it.

Make a commonplace book of favorite quotations. Start a diary.

I think all this hectic activity is a gross mistake and a perverse misuse of this book. Why can't the pages be left blank? Why tamper with perfection? How refreshing to see *The Nothing Book* on one's bookshelves, wedged in between all those garrulous authors, prettily minding its own business, making no demands on our time and attention, espousing no lunatic cause of the moment, promising no more than it is prepared to give.

So artistically and spiritually satisfying is *The Nothing Book* that I only hope a companion long-playing record will be released. Fifty minutes of blessed silence is a boon anybody should be willing to pay for nowadays, and with no royalties or musicians' unions to pay, the possibilities are endless. Even a 19-record set the length of Wagner's interminable Ring Cycle should not be beyond the creative capacities of the genius who thought up *The Nothing Book*.



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FOUR RUPEES

SPRING 1975

THE BATAVIAN AMERICAN



THE WORLD OF WORK

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CHANGING ATTITUDES TOWARD WORK

James O'Toole et al
THE REDESIGN OF JOBS

Robert Schrank
WHAT DO WORKERS REALLY WANT?

Daniel Bell
THE IMPACT OF AUTOMATION

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BOOK REVIEWS

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A NOTE TO THE READER

It is curious that, until recently, philosophers and social scientists had little to say about the experience of work, which occupies the major portion of most people's waking hours. One reason is that, until the modern era, hard and sustained physical work was necessary for survival. The Biblical injunction—"In the sweat of thy face shalt thou eat bread, till thou return unto the ground"—held true for most people throughout history.

Work is still indispensable for survival. But today there is a significant difference. With the coming of the industrial machine, work became less arduous and less physical. More important, the setting of work became more subject to human planning, and the rise of the trade union movement proved that the conditions of work could be improved without hurting productivity. Many thinkers foresaw an end to the Biblical injunction. Early in this century, H.G. Wells wrote: "There will be little drudgery in this better-ordered world. Natural power harnessed in machines will be the general drudge."

Yet while the conditions of work improved, Wells's prophecy has remained unfulfilled. From every industrially-developed country—whether its economy is capitalist, socialist or mixed—come increasing reports of worker discontent, high levels of absenteeism, large turnovers of the labor force, and even acts of sabotage. Clearly, as the fear of economic insecurity has declined, worker expectations and aspirations have risen faster than the economic structure has been able to respond to them.

The contributors to our special section address themselves to the problem of making work more interesting, more involving and more pleasurable. Although they diverge in their analyses and their proposals for change, they all agree that such a goal is central to the future well-being of society and is, to some degree at least, attainable. We welcome comments from readers.

N.G.

special section

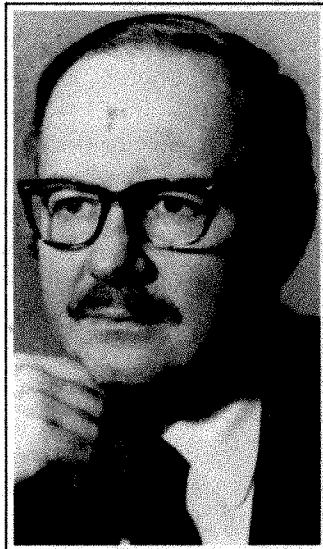
The World of Work

CHANGING ATTITUDES TOWARD WORK

By Daniel Yankelovich

The traditional view of work is being challenged today by new cultural values. As a consequence, workers at every level are asking for more than purely economic rewards from their jobs. These rising expectations, the author believes, have created new social tensions which are disturbing but potentially liberating, especially for younger workers and for women.

Professor of psychology at New York University, Daniel Yankelovich is also president and founder of the largest U.S. "attitude research" firm, which bears his name. He is author of *The Changing Values on Campus*, and co-author (with William Barrett) of *Ego and Instinct: The Psychoanalytic View of Human Nature*. His article is reprinted from the recent collection of essays, *The Worker and the Job: Coping with Change*, edited by Jerome M. Rosow and published by Prentice-Hall, Inc.



The vast majority of people in the United States, as in every other country, still organize their lives around the struggle to make a living. Where we live, how well we live, whom we see socially, how we pattern our daily routines, how we educate our children—all of these facets of our lives are dominated by the work we do.

But we are now living through a period of vast cultural change, the essence of which lies in the transformation of the work ethic, that is, the high valuation of work and of the qualities that make a "good worker." Indeed, so central is the work ethic to American culture that if its meaning shifts, the character of our society will shift along with it.

What do we mean by the work ethic? To trace its origins, we have to go back to the beginnings of Western civilization. The early Greeks

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regarded work as a curse. The word for work derives from the Greek word for sorrow, *ponos*, suggesting drudgery, heavy-heartedness, exhaustion. Work had no inherent value for the ancient Greeks. For the Hebrews, the meaning of work was almost as bleak, but with one saving feature. Work was regarded as atonement and expiation for the original sin of disobeying the word of God.

It was Christian civilization that slowly began to build the accretion of meanings that have evolved into the modern work ethic. The early Christians at first followed the Hebrews in their conception of work as a punishment laid on by God for man's original transgressions. Gradually several positive meanings accrued to work. The early Christians saw work as necessary to maintain the health of body and mind and to keep evil thoughts at bay. Contrary to the Greeks, they conceived of work as a defense against despair rather than as the expression of despair itself. They also looked to work as a way to spread charity and to share with the needy. Eventually, they came to believe that the accumulation of worldly goods need not lead to wickedness and perdition. Since possessions could be shared with others, God's blessings would shine on the giver as well as the receiver. But no inherent virtue attached to work itself. One worked long enough and hard enough to support the immediate needs of self and family. That rare person lucky enough to live without working was not scorned by society.

It remained for the advent of Protestantism to invest work with the moral meanings we associate with the American work ethic. Martin Luther in the 16th century took the decisive step when he eliminated the distinction between working and serving God. He conceived of work as a way to serve God, indeed as the best way. Luther even condemned the monastic and contemplative life of piety in the monasteries of his day as expressions of egoism: the symbols of the snobbery and conceit of monks who thought themselves superior to the common man. It is Luther, then, who endowed the idea of work with an intense religious and moral character.

Calvinism further strengthened the moral connotations of work. To the strict Calvinist, success at work, when made tangible in the form of wealth, could be taken as a sign that the work was pleasing to God — especially if the work was carried out in a highly organized, efficient, and rational form.

The Work Ethic Today

The present-day work ethic in America is rooted in this Protestant tradition. A study of basic American life values in the mid-1960's showed that a majority of the adult population at that time associated four cultural themes with work. These themes link work with peoples' life values and form essential parts of what we mean by the American work ethic:

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• *The Good Provider Theme:* The breadwinner — the man who provides for his family—is the real man. Here is the link between making a living and the society's definition of masculinity. This concept of masculinity also conveys overtones of adulthood, responsibility, and intensity of loving care for others.

• *The Independence Theme:* To make a living by working is to "stand on one's own two feet." It means one has gained—and earned—freedom and independence.

• *The Success Theme:* Hard work leads to success. For the majority, the rewards come in the form of a home of one's own, an ever-rising standard of living, and a solid position in the community.

• *The Self-respect Theme:* A man's inherent worth and dignity are reflected in the act of working.

Manhood, responsibility, economic security, independence, success, self-esteem, dignity—these are the moral elements from which the daily life of people is shaped. From this substratum of moral values grow such diverse phenomena as the traditional American resistance to nonpunitive welfare legislation (because it suggests that not working is morally acceptable), and the deterioration of morale caused by prolonged unemployment, apart from its economic consequences (because of the threat to self-esteem). Pay for housework has become a demand of great symbolic significance to the women's movement, one implication of the work ethic being that work for which one is *not* paid merits neither recognition nor respect.

We begin to see how deeply embedded the work ethic is in general cultural values, and why changes in the culture necessarily color the meaning of work. Let us now examine some of the new cultural trends that are gradually transforming the work ethic. Among the most important are: the changing meaning of success in America; lessening fears of economic insecurity; a weakening of the rigid division between the sexes; a growing "psychology of entitlement" leading to the creation of new social rights; and spreading disillusionment with the cult of efficiency.

The Changing Meaning of Success

Throughout most of the post-World War II era, Americans shaped their ideas of success around money, occupational status, possessions, and the social mobility of their children. These ideas still count. Certainly, Americans are drawn to money for its practical uses and also to signify to themselves and others that they have achieved a niche in the world. But people are no longer as ready to make sacrifices for this kind of success as they were in the past. Nor is the person who has settled for an unpleasant life-style in exchange for a high salary considered more successful than someone with less money who has created an agreeable life-style for himself. There are, of course, millions of people

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who adhere to older views of success as defined exclusively in terms of money, but the trend is moving away from them.

Perhaps most significantly, the trend is away from postponing self-gratification in order to insure the upward mobility of one's children. One of the old-time favorite plots of films and books concerns the hard-working, self-denying parent who slaves away day and night as charwoman, laundress or laborer to insure the success of a child. Today, such scenarios are tinged with nostalgia. Of course, people still want their children to be successful and are willing to provide whatever advantages they can afford. But they no longer regard living *through* their children as a proper substitute for success in their own lives. Today's ideas about success revolve around various forms of self-fulfillment. The emphasis is on the self and its unrealized "potential."

The breakdown of certain types of conformity is another consequence of new ideas about success. Each person is assumed to be unique. Thus tolerance for offbeat and unusual life styles to express one's individuality is spreading. This does not mean that social conformity is now collapsing around our heads. On closer inspection, most "unique" life styles take on a standard look. But conformity in practice is not the same as social pressure to conform. People feel it is all right to conform if conformity is one's own free choice.

Less Fear of Economic Insecurity

Vast segments of the public have grown less fearful that economic catastrophe will strike without warning and render them destitute. Of course, inflation disturbs people and causes them to be distressed about making ends meet. But people today are less afraid of losing their jobs, facing a poverty-stricken old age, or finding themselves in a situation where they are unable to cope economically.

For many generations there had been an unspoken consensus in the United States (and in most other nations as well) that economic security was so important and so difficult to insure that no sacrifice was too great for the sake of preserving it. This silent assumption dominated our national life. Its unchallenged acceptance gave our society its distinctive character, shaping common goals, and pervading the political and economic life of the nation. For example, if an industrial plant was spewing pollutants into a nearby waterway and the community objected, all the plant manager would have to say was, "That will mean we'll have to lay off a few hundred men," and typically the community would back off from its demands.

In the past few years, the consensus has begun to collapse. A majority of adults (approximately 60 percent) state that they continue to place economic security above all other goals, but a substantial 40 percent minority say that they are now prepared to take certain risks with their own and the nation's economic security for the sake of enhancing the

Changing Attitudes Toward Work

quality of life. We are not surprised to find that the majority still adheres to the old view; what is striking is that so large a minority has adopted this new and far-reaching value orientation.

Division of Labor by Sex

A rigid division of labor between the sexes has long been a prominent feature of family life in America, as elsewhere. According to the standards of the society, man is responsible for making a living, and this role is all-important and all-consuming. Thus the wife automatically becomes the helpmate and residual legatee of most other family responsibilities, especially care of home and children. Like the man's role, the woman's, in addition to its practical economic aspects, also takes on emotional overtones edged by fear of inadequacy.

One consequence of the reduced fear of economic insecurity has been a concomitant lessening in the fear and guilt experienced by people when they take a more casual attitude toward their role obligations in marriage. The iron economic discipline that maintained the rigidity of the sex roles in the past has weakened. Under the impact of the women's liberation movement a far greater flexibility has marked the relationship between the sexes.

While most Americans still reject a full interchange of roles between men and women, they are very much in favor of an easier, more flexible division of effort. Gradually, year by year, they are accepting a more informal, less fixed separation of obligations, expectations, and responsibilities. A majority of families today feel that it is perfectly all right for men to participate in shopping and in cleaning the home, and more than three out of ten families look with favor on men participating in daily meal preparation. Conversely, the idea of women working for purposes of self-fulfillment rather than economic motives gains wider acceptance all the time. And, in fact, women are pouring into the work force in unprecedented numbers—and at a faster rate than men. (Women now constitute almost 40 percent of the total work force.) Women have always worked for economic reasons, but now, superimposed on the economic motive, is the powerful psychological force of self-realization. Its effects are changing work values almost as much as they are changing the nature of the family.

The Psychology of Entitlement

A fourth category of cultural change is a spreading "psychology of entitlement," the growth of a broad new agenda of "social rights." This is the psychological process whereby a person's wants become converted into a set of presumed rights. Thus the traditional desires for secure retirement, for the best medical care, for participation in work decisions and satisfaction in one's job, for a college education available to one's children—these have become widely seen as *rights*. This trans-

formation is seen by social scientists as part of a worldwide revolution of rising expectations.

The concept of social rights has always exerted a strong force in American society, but in recent years a number of new institutional forms have sprung up that immensely shorten the time span between the individual's sense of entitlement and political action. In the 1960's a variety of social movements came into being—the civil rights movement, the student movement, the ecology movement, the consumer movement, the women's movement. These served to articulate and define a full agenda of new social rights.

Challenging the Cult of Efficiency

Max Weber, a founder of modern sociology, believed that the master key to the fate of advanced industrial societies lay in the implacable unfolding of the process of "rationalization." By rationalization Weber meant a broader version of what a modern plant manager tries to do when he "rationalizes" his production line, i.e., organizes it so that he can produce the most products at the greatest speed for the least amount at the lowest cost, with all the standardization and controls that this process implies. Weber predicted that in modern industrial society, the process of rationalization and bureaucratization would not remain confined to the domains of business and government.

In the post-World War II culture of the United States, the process of rationalization reached deep into the social structure. Our large business corporations, "think tanks," government agencies, and many other institutions model themselves on systems of organization that strive to realize the ideals of cost-effectiveness, division of effort, efficiency, measurement of results, and statistical controls. Sometimes these ideals are carried beyond the boundaries of practicality, with quantitative methods and "rational" procedures becoming enshrined as rules of operation for their own sake, even when they actually interfere with the task at hand.

This cult of efficiency was often challenged by philosophers and artists, and most vociferously in the 1960's by the youth counterculture. In the past few years, a questioning of these values of efficiency has begun to reach beyond the confines of the counterculture. The form it assumes in the general population is not nearly as extreme or doctrinaire. But the average American is beginning to wonder whether too great concern with efficiency and rationalization is not robbing his life, just as Weber suspected it would, of the excitement, adventure, mystery, romance, and pleasure for which he yearns—especially if he is a young American. To be sure, people are annoyed when the telephone does not work or their automobile mechanic does not know what he is doing. Nonetheless, they are beginning to question values centering on efficiency, planning, and organization of time.

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Economic vs. Psychological Satisfaction

The important question of whether or not Americans are satisfied with their work is presently bogged down in a heated but fruitless controversy. On the one side are those observers of the work scene who cite public opinion polls to prove that the overriding majority of Americans are satisfied with their work. The other side, represented by many sociologists, industrial psychologists, journalists, and other observers, points to a variety of statistics, observations, and studies that show a rising tide of disaffection in the work force.

Which side is correct? Well... both are. Each party to the controversy has fastened onto a different facet of a complex, multifaceted problem. The seeming contradiction between them is more apparent than real. It can probably be resolved—and a useful perspective gained—by keeping three variables in mind: the age of the worker, the expectations he (or she) brings to the job, and the difference between the economic and psychological satisfactions people seek from their work.

The key economic satisfactions people look for from their jobs are a good salary, the prospects for a secure retirement, and job security. Significantly, most people today who are employed full-time feel that these economic needs are now being met by their jobs, more or less satisfactorily. This feeling, more than any other, creates a climate of social stability that was lacking in the 1930's when the country faced what then appeared to be the insoluble problem of mass unemployment. This is a point of cardinal importance. If we are to retain perspective on changes in the work ethic, we must always bear in mind that most people who work for a living do so mainly for economic reasons and that the large majority of them feel that their economic expectations are met by their current jobs.

This is the picture presented by the public opinion polls. But while it is correct as far as it goes, it is a dangerously incomplete basis for judging the present situation. If we now take age, expectations, and the psychological benefits sought from work into account, we develop a fuller, more accurate picture. Taking age 35 as a dividing point, we find that most working people over 35 expect and demand little more from their jobs than the economic benefits of income, job security, and secure retirement. In contrast, workers under 35, both men and women, demand more than simple economic rewards. Increasingly, they look for psychological rewards: the feeling that one is doing a good job at whatever one is doing—a part of the traditional work ethic; and the yearning to find self-fulfillment through "meaningful work." By meaningful work people usually mean: (1) work in which they can become involved or interested; (2) work that challenges them to the utmost of their capabilities; and (3) participation in decision making. A growing number of young people each year say that they are prepared to trade off salary in exchange for meaningful, self-fulfilling work.

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It should be stressed that nearly everyone would like to enjoy both types of benefits from their jobs—economic and psychological. Almost all now expect the economic benefits—increasingly as a matter of right. But only the younger people feel they are *entitled* to some of the psychological benefits as a right rather than as a matter of luck or special effort on their part.

Youth and Work Values

However, there is a significant difference between the expectations of college-trained youth (around 30 percent of the age group) and the non-college majority. For those who graduate from college or university, an abundance of meaningful and interesting jobs are, and most likely will continue to be, available in the professional, managerial and technical categories. But the non-college majority recognize that, lacking a college education, they are less likely to find interesting work. The idea of meaningful work is attractive to these young high school graduates, but they do not really expect to get it from their jobs. Opportunities for skilled workers in industrial jobs are shrinking. Information about good jobs open to the person without a college education is difficult to acquire.

Out of this confusion there emerges a split *within* the present youth generation that is far greater—and more dangerous to the society—than the split *between* the generations. The college-educated minority, which only a few years ago seemed largely alienated from the work world and the work ethic, is today inclined to adapt to both. But there is a difference from past attitudes of accommodation. What we see now in this group is the active pursuit of a career as a means of self-fulfillment, with money and security included in the overall scheme, but always subordinate to the main goal of finding psychological gratification in their work.

In contrast, the majority of young people who lack a college degree do not find in work a major source of gratification. For their self-fulfillment, these young people search for outlets outside the job—in sports, in family life, in the quest for excitement. Here, once again, we may ask, “What is new?” Are we not seeing the old familiar pattern wherein people make a living from their jobs and look for personal fulfillment outside the job? Perhaps. But there are some new elements in the present picture.

Simply because they lack a college degree does not mean that young people are immune to the vast cultural changes taking place in the country. They are no longer as automatically loyal to the organization as their fathers, and they are far more cognizant of their own needs and rights. Nor are they as awed by organizational and hierarchical authority. Being less fearful of “discipline” and the threat of losing their jobs, they feel free to express their discontent in myriad ways, from fooling

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around on the job to sabotage. They want more freedom and will bargain hard to keep their options open. A bitter fight over the right to refuse mandatory overtime, for example, does not mean that young workers will not work overtime. It does mean that the freedom to say "no" assumes symbolic significance as an expression of freedom and autonomy. Moreover, if the work itself is not meaningful to them, they will opt for early retirement, shorter work weeks, frequent absenteeism, more leisure, and other methods for cutting back on their job commitment.

Women and Careers

Next to youth, women constitute the group most affected by the new cultural values. The past decade has seen a sizable influx of American women into the work force; by 1973 they made up almost 40 percent of all persons employed. While the majority of women seek jobs for the same reason that women have always worked—to help make ends meet—our surveys show that three out of ten women employed in 1973 placed their need for personal self-fulfillment ahead of economic need as their main reason for working. Earlier studies suggest that a negligible proportion of women worked for non-economic motives in the past.

Working women—especially the large number with a college education—have become strong advocates of "social rights." The pressures they are putting on employers for equal pay, equal work, and equality of opportunity are proving difficult to resist. Employers are scrambling to eliminate barriers and to right old wrongs. The greatest pressure in the future will come at the executive levels of business, government and education, for it is here that women discern, correctly, the sturdiest barriers to equality of opportunity.

A more subtle but potentially far-reaching impact concerns the swelling numbers of women in the workplace. Earlier I discussed the growing flexibility of the role relations between husbands and wives. Although many women may work for psychological gratification, they insist, and rightly so, on being remunerated on the same basis as men. As a consequence, many women today earn as much or more than their husbands. Even women who earn somewhat less than their husbands often earn enough so that the husband is no longer the sole provider of economic well-being. What effect does this new situation have on the male wage earner?

In some cases, the effect is to greatly improve the family's quality of life. Contrary to stereotypes about male chauvinism, men tend to be more responsive to women's rights than women themselves, especially young men in the 18-24 year age range. Many an older man who is overworked and living under stress has warmly welcomed sharing his economic burden with his wife. In such cases, the result is often an improved family equilibrium, a more satisfying sexual relationship, and a more gratifying partnership overall. Also, to the approximately

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one out of five men who say that their work (usually professional or managerial) fills their psychological as well as their economic need, a working wife is no threat, especially when her economic contribution is not needed.

But the working wife who is a good earner can pose a potential threat to the non-college majority who work hard, manage to make a living, and seek their personal fulfillment through their families. For many of these men "a job is just a job." Their half-hearted satisfaction with their job reflects a precarious social bargain. They accept the frustrations of boring work and lack of involvement in the decisions that make work meaningful precisely because they accept the necessity of making sacrifices for their family. As long as the money comes in, and as long as the family provider is not threatened, most men will go along, often cheerfully, with the work routine, however arduous it is. If, however, the man's role as breadwinner grows less vital, the whole fragile bargain threatens to break down.

It may be that a work bargain which calls for a man to endure countless frustrations in the workplace in order to carry out his role as provider for his family is obsolete and should be done away with. But it would be folly not to recognize that it is the prevailing arrangement and it binds the social structure together in important respects. If it threatens to break down, we would be wise to acquire a sound understanding of how to replace it. Unfortunately, one unanticipated and unwanted byproduct of the women's movement may be to intensify men's disaffection with their work. The women's movement with its emphasis on women becoming more economically assertive and independent puts at risk a fragile psychological balance which has supported men's job satisfaction for many years.

Future Directions

Perhaps the best way to summarize the various trends and counter-trends I have touched on is to forecast what changes are likely to occur in the American work ethic. Four principal themes were associated with the work ethic as of the mid-1960's. One is the link between work and psychological independence, especially between *paid* work and autonomy. This link is likely to grow even stronger in the future. In the past, it has been tied mainly to the male adult. In the future, it will be developed increasingly as an entitlement, a social right, appropriate to women as well as men, and to youth as well as the middle-aged.

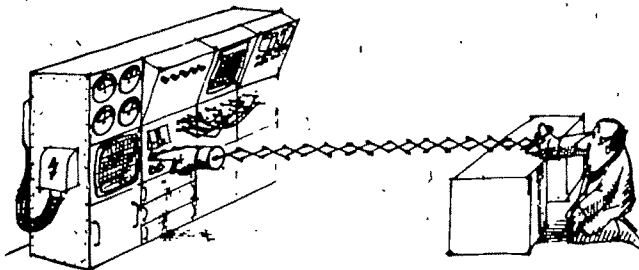
A second theme long associated with the work ethic, that of the male as family provider, will probably change in the future. The change may be slow, since there is deep resistance to the idea that traditional sex-linked roles should be abandoned totally. Though gradual, this shift is already in motion: sex-linked roles in marriage are becoming far more flexible, especially among our college-educated young people.

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The idea that all jobs (however menial) possess an inherent dignity, is the third theme. Here, I suspect, we will see rapid change in the future as the psychological satisfactions demanded from work increase in intensity. For better or worse, dignity will adhere to work that the individual can define to himself as "meaningful." Since the definition of meaningfulness is largely subjective, there is no necessary relationship between low status jobs and lack of dignity. The Harvard graduate who chooses to become a farmer or carpenter or forest ranger is still a rarity. But as rigid status stratifications lose some of their iron grip on the society, and the demand for individual self-fulfillment finds new and varied forms of expression, we may see the occupational structure lose much of its hierarchical character.

The most far-reaching transformations are likely to occur in the fourth theme, the idea that "hard work always pays off." In the past, the payoff for hard work has come in the form of the extrinsic rewards of money and job security. In the future, as new ideas of success take hold, the definition of what success in work means will also change. There will be far more stress on the quality of working life, with the psychological satisfaction of work being given as much weight as the economic. The incentives to work hard, if they are to prove effective, will have to include a prominent role for self-fulfillment.

Unfortunately, no one truly knows the relationship between work satisfaction and productivity. The research on this relationship is confusing and contradictory. As psychologist Robert Kahn has observed in *The Human Meaning of Social Change*, "Satisfaction is related to productivity in some circumstances and not in others, and these circumstances have yet to be defined." This fact—that we do not even understand how productivity and human satisfaction on the job are linked together—is symptomatic of the problems that lie ahead. Which turn in the road we take in the future depends largely on how our institutions confront the growing institutional lag between present methods of work organization and the rising aspirations of workers as they respond to the new cultural values.



THE REDESIGN OF JOBS

By James O'Toole et al.

Can work be made more interesting? Is the past century's trend toward increased specialization in industrial plants reversible? Does an increase of variety and responsibility in jobs mean a reduction in profits? These are some of the questions confronted in the following article, which is excerpted from the controversial recent report on *Work in America*, commissioned by the U.S. Department of Health,

Education and Welfare.

The report was written by a 10-member task force composed of social scientists and representatives from industry, labor and government. The group was headed by Professor James O'Toole of the University of Southern California, author of *Watts and Woodstock*, a study of minority group culture in two contrasting political settings.

Significant numbers of American workers are dissatisfied with the quality of their working lives. Dull, repetitive, seemingly meaningless tasks, offering little challenge or autonomy, are causing discontent among workers at all occupational levels. This is not so much because work itself has greatly changed; indeed, one of the main problems is that work has not changed fast enough to keep up with the rapid and widescale changes in worker attitudes, aspirations, and values.

Work problems affect various segments of American society, from blue-collar workers to white-collar workers to managers. Young workers appear to be as committed to the institution of work as their elders have been, but many are rebelling against the anachronistic authoritarianism of the workplace. Women, who look to work as an additional source of identity, are being frustrated by an opportunity structure that too often confines them to jobs damaging to their self-esteem. Many older Americans suffer the ultimate in job dissatisfaction by being denied meaningful jobs (through early retirement or reluctant hiring) even when they have demonstrable skills and are physically capable of being productive.

The physical and mental health costs of jobs as they are now designed are considerable. Various aspects of work contribute, for example, to many of the factors associated with disease. Dull and demeaning work, work over which the worker has little or no control, also contributes to an assortment of mental health problems. On the other hand, satisfaction with work appears to be the best predictor of longevity—better than known medical or genetic factors. Our findings demonstrate that work can be transformed into a powerful source of psychological and physical rewards, and thus can be used to alleviate the problems it presently causes or with which it highly correlates.

The solution we suggest is the redesign of work. Several dozen well-documented experiments show that productivity increases and social problems decrease when workers participate in the work decisions affecting their lives, and when their responsibility for their work is buttressed by participation in profits.

It has been estimated that some 3,000 American workers have been involved in *extensive* redesign efforts. (We exclude from this category the tens of thousands of workers involved in *limited*—that is, more modest and more superficial—efforts at job reform.) Because of the small number, one is tempted to call them “experiments.” This is not to say that no general principles whatsoever can be derived from the redesign that has occurred. To the contrary, these examples have in common the participation of workers in decision making, and in many cases, profit-sharing.

Participation in Management

In the redesigned work settings attempted so far, one finds the workers taking part in decisions on a number of management responsibilities, such as their own production methods, the internal distribution of tasks, questions of recruitment, questions regarding internal leadership, what additional tasks to take on, and when they will work. Our examples do *not* include participation through representatives, since, as experience has shown, that kind of participation may foster alienation due to the inevitable gap between expected and actual responsiveness of the representatives. Nor do our examples include placing workers or union representatives on the board of directors of a corporation. Where workers have so served, neither participation by the rank and file nor productivity has increased, and worker alienation has not decreased.

Participative management means that workers exercise some direct control over aspects of work intimately affecting their lives. It permits the worker to achieve and maintain a sense of personal worth and importance, to grow, to motivate himself, and to receive recognition and approval for what he does. It gives the worker a meaningful voice in decisions in the one place where the effects of his voice can be immediately experienced. In a broader sense, it resolves a contradiction between democracy in society and authoritarianism in the workplace.

An Example of Work Reform

A practical example of how job redesign may affect a work force can be found in a General Foods manufacturing plant. This pioneering factory was designed to provide superior working conditions, enlist unusual human involvement, and achieve high productivity. Management built this plant in an effort to avoid the problems of an existing plant where employees manifested severe symptoms of alienation.

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Because the workers in that plant were chronically indifferent and inattentive, the continuous process type of technology used in the plant was susceptible to frequent shutdowns, leading to product waste and costly recycling. There were serious acts of sabotage and violence. Employees worked effectively for only a few hours a day and strongly resisted changes that would have resulted in a more productive use of manpower.

Management enlisted the advice and cooperation of workers in the old plant and consultants from business schools, and together they designed a new plant along the following lines:

- *Autonomous work groups.* Self-management work teams were formed and given responsibility for large segments of the production process. The teams were composed of from eight to twelve members—large enough to cover a full set of tasks, and small enough to allow effective face-to-face meetings for decision making and coordination. The teams decided who would do what tasks, and most members learned to do each other's jobs, both for the sake of variety and to be able to cover for a sick or absent co-worker.

- *Integrated functions.* Activities formerly performed separately by maintenance, quality control, custodial, industrial engineering, and personnel units were built into the operating team's responsibilities. The teams accepted both first and final responsibility for performing quality tests and ensuring that they maintained quality standards.

- *Challenging job assignments.* An attempt was made to design every set of tasks in a way that would include some functions requiring higher human abilities and responsibilities. The basic technology employed in the plant had been designed to eliminate dull or routine jobs insofar as possible. Still, some nonchallenging but basic tasks remained. The team member responsible for these operations was given other tasks that were mentally more demanding. The housekeeping activities were included in every worker's assignment in order to avoid having members of the plant community who did nothing but cleaning.

- *Job mobility and rewards for learning.* The aim was to make all sets of tasks equally challenging, although each set would comprise unique skill demands. Consistent with this aim was a single job classification for all operators, with pay increases geared to mastering an increasing proportion of jobs, first within the team and then in the total plant. Thus, team members were rewarded for learning more and more aspects of the total manufacturing system. Because there were no limits to how many team members could qualify for higher pay brackets, employees were encouraged to teach each other.

- *Team leadership.* In lieu of "supervisors" whose responsibilities are to plan, direct, and control the work of subordinates, a "team leader" position was created with the responsibility to facilitate team development and decision making.

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- *Managerial information for operators.* The design of the new plant called for providing operators with economic information and managerial decision rules. This enabled production decisions ordinarily made at the second level of supervision to be made at the operator level.

- *Self-government for the plant community.* Management refrained from specifying in advance any plant rules; rather, it was committed to let the rules evolve from collective experience.

- *Encouraging team feeling.* Differential status symbols that characterize traditional work organizations were minimized in the new plant—for example, there were parking lots open to all employees regardless of position, a single office-plant entrance, and common decor throughout office, cafeteria, and locker room areas. The technology and architecture were designed to facilitate rather than discourage the congregating of team members during working hours. The assumption was that these *ad hoc* meetings would often be enjoyable human exchanges as well as opportunities to coordinate work and to learn about each other's job.

Gains in Productivity

Using standard principles, industrial engineers had indicated that 110 workers would be needed to run the plant. But when the team concept (rather than individual assignment) was applied, and when support activities were integrated into team responsibilities, the result was a force of less than 70 workers. While this 40 percent smaller work force is impressive, it is not the major economic benefit, because labor costs per unit are not a large percentage of the cost of goods sold in this particular business. The major economic benefit has come from such factors as improved yields, minimized waste and avoidance of shut-downs. Significantly, these are productivity items that are related to *technology* but are especially sensitive to the *work attitudes* of operators.

What is particularly encouraging is the impact of this unique work setting on employees' activities outside the plant. For example, many workers have been unusually active in civic affairs (e.g., charities, schools, churches, political parties), apparently much more so than is typical of the workers in other plants in the same corporation or in the same community. It has long been observed that workers in dull, isolated, or routine jobs seldom participate in community affairs; but this is the first instance where it has been shown that the redesign of work can have positive effects on community participation.

Participation in Profits

Like a number of other innovating companies, General Foods concentrated its redesign of jobs on the goal of greater worker participation in management decisions. But our research has shown that participation in profits is also needed. Otherwise workers tend to feel that participative management is merely a refined technique for improving produc-

tivity at their expense. Without profit sharing, workers may feel that they have been manipulated, and productivity may slip back to former levels. Profit sharing is also the most direct response to the problem of equitable wage increases for employees: the contribution of the worker can be tied directly to his salary increases.

Profit sharing also responds to another problem—that of inflation generated by rising salaries not tied to productivity. Negotiated contracts during two recent years awarded compensation increases to labor in the range of 7 to 15 percent, while our national productivity was increasing by less than one percent in either year. Profit sharing could be of some help in reducing these inflationary tendencies of our economy by tying wage increases in particular industries more closely to productivity increases.

In 1971 the Profit Sharing Research Foundation studied a group of the largest department store chains in the United States. They divided the chains into those with profit-sharing plans and those without, and compared them on both operating ratios (number of workers needed for similar tasks) and growth measures over a period of 18 years. On all significant measures, the profit-sharing group of companies outperformed the non-profit-sharing group by substantial and widening percentages.

Although the record of profit sharing is generally positive, it does not automatically insure greater productivity. To be truly effective it must be tied to participative management, to a feeling of involvement in decision making. Beyond this general principle, profit sharing is most effective when it is clearly in addition to traditional wage increases and fringe benefits; when it is tied to the “productivity” of the worker or his small team and not the “profitability” of the entire firm; and when the plan is contractual rather than subject to withdrawal at the whim of the employer.

Obstacles to Job Redesign

If the advantages of redesigning work are as compelling as we suggest, what need is there to advocate it? Why isn't there a stampede by industry in that direction? The answer, of course, is that “it isn't as easy as it looks.”

The reluctance of employers to move swiftly appears to stem from the following quite understandable considerations:

1. There is no end to personnel theories, to administrative panaceas for revitalizing the workplace, and to consultants claiming arcane knowledge of magical transformations. Single remedies abound for the ills of work. Such efforts have failed because there is no single source of job dissatisfaction. In brief, the bad experiences of employers in the past have led them to ask: whom can I trust?

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2. Some employers, trusting or not, simply do not know how to proceed. They don't know how to redesign work themselves; they don't know to whom they can turn; they may not even know where to begin to look for assistance.

3. For some employers, the experimental information gained to date is in firms different from theirs, and they would prefer to have directly applicable information before making a move.

4. Some employers may be willing to make changes but lack risk capital for transitional costs. In the short-run, these costs may not be trivial.

5. In some industries there is opposition from trade unions to the notion of job redesign.

We do not know how extensive these problems are, nor which are crucial. But we recognize, in the final analysis, that the reluctance of employers to act will never be overcome by arguments based simply on improving the welfare of workers. Employers for the most part see their responsibility in terms of profits. In their view, their obligations are to shareholders, not to workers. It is imperative, then, that employers be made aware of the fact that *thorough* efforts to redesign work—not simply “job enrichment” or “job rotation”—have increased productivity from 5 to 40 percent. In no instance of which we have evidence has a *major* effort to increase employee participation resulted in a long-term decline in productivity. Thus, employers who make *genuine* efforts to redesign work most often will be responding directly to their obligations to shareholders.

The Role of the Trade Unions

Clearly, the prime responsibility for improving the quality of working life rests with employers. But, just as the earlier fragmentation of jobs could not have succeeded without the acquiescence of the trade unions, present efforts to reverse that trend will likewise require an active and responsible union role.

There are several reasons why unions have been even slower than management to come to grips with problems of job design. Some union officials feel that they have been misled by managerial changes in the past, and that job redesign is yet another scheme to reduce the size of the work force through wringing every ounce of productivity out of the worker. Another explanation is that unions have traditionally limited their concern to questions dealing with protection for all existing jobs in a company or an industry; consequently, they have little experience with questions of specific job design. The answer to their problem may lie in developing cooperative efforts (with other unions and with management) to carry out the redesign of work.

But the first requirement is that unions make a commitment. As Irving Bluestone of the United Auto Workers writes, “Just as manage-

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ment is beginning to ponder the new problems of discontent and frustration in the work force, so must unions join in finding new ways to meet these problems." If new ways are to be charted and accepted, the trade union movement must be among the initiators of new demands for the humanization of work. At the very least, such an initiative would increase their members' enthusiasm for their unions. On the other hand, if dissatisfying jobs lead to high turnover, it is difficult to see how unions can develop any long-term attachment among temporary members.

Management, unions, and workers, in the final analysis, are the only ones who know the right way to build their product or perform their service. However, government does have a legitimate role to play in encouraging these parties to redesign work tasks—especially since the failure to do so is resulting in increased social costs. We have sufficient information about the relationship between work and heart disease, longevity, mental illness, and other health problems to warrant governmental action. That jobs can be made more satisfying and that this will lead to healthier and more productive workers and citizens is no longer in doubt. What remains is to find a way to overcome the reluctance of employers and unions to act.

The Role of Government

International experience, especially in the Scandinavian countries, suggests that government can act as a catalyst to encourage and aid union and management efforts to redesign work. In Norway, the government, employers, and labor unions jointly sponsor an organization—the Norwegian National Participation Council—that encourages experimentation in the design of work. They have also formed a Parliamentary Commission to work with labor and management to encourage the redesign of jobs. Similar efforts have taken place in Sweden and have helped to create the climate that led to humanizing and productive changes on the automobile assembly-line at the Saab and Volvo corporations.

It would appear to be worthwhile to emulate these Scandinavian experiences. They might be adapted to the American system through the formation of a public corporation which would, first of all, compile and certify a roster of qualified consultants to assist employers with the technical problems in altering work. Secondly, it would make available a non-partisan resource to which management and labor could turn for advice and assistance. Thirdly, it would provide an environment in which researchers from various disciplines who are working on job redesign could meet with employers, unions, and workers to pool their experience and findings.

Apart from sponsoring such a public corporation to advise those concerned with job reform, the government could consider even more direct involvement. For example, it might fund programs to retrain

the thousands of managers and industrial engineers who were taught the "efficiency expert" concepts of Frederick Taylor, including the "time-motion" studies that further fragmented and dehumanized industrial work. On another front, the government could finance demonstration projects which attempt experimentally to solve the considerable technical problems involved in redesigning some of the most monotonous and least attractive jobs in industry—e.g., those on the assembly line.

An Experimenting Society

But we should realize that such governmental support, helpful though it may be, is not the answer to the problems of America's workers. There is no single road to the discovery of a formula that simultaneously maximizes productivity and satisfaction. The redesign of each job constitutes a unique experiment—one that can be facilitated through knowledge of certain principles, techniques, and past experiences—but one that essentially requires the cooperation of workers, managers, and unions in a frequently complex trial-and-error process. Thus, what is needed is the translation of available knowledge and research into "actionable" methods, and a willingness to try new forms of work. In the long run, such a commitment would reflect the desire to become an experimenting society—not merely in the sense of trying new things, but in terms of careful evaluation under circumstances that we can afford and measure.

Such an experimental approach is novel only in its application to problems of social policy. In other sectors of industry it is as familiar as the design and trial of a new airplane or a pilot plant. It remains now to be tried with respect to the social arrangements of work, as well as to the technical.

Industry has begun to experiment with work design in a promising but tentative fashion. Xerox has permitted a small number of their executives to spend a year working in public service agencies. One might see this developing into an experiment in institutional rotation, in which a manager spends a year at a major corporation, another in city government, and another at a university interspersed throughout his working life. Not only would the individual benefit from the variety but the institutions would benefit from a broadening of their perspectives.

A general experimental goal for America might be to incorporate those functions of variety and autonomy that make for job satisfaction among independent professionals into the jobs of lower-level workers. Robert Kahn has suggested an experiment to suffuse even lower-level jobs with the flexibility of professional jobs. He would break down the work day into units (modules) that represent the smallest allocation of time on a given task that is sufficient to be economically and psychologically meaningful. Workers could allocate their time as they saw fit—

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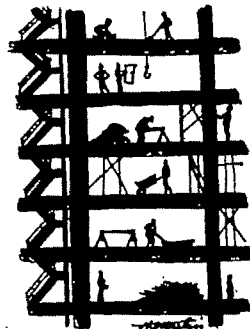
working a two-hour module on one task, the next two hours on another task, etc.

The modules would provide variety and a chance to learn other tasks. They would also facilitate the scheduling of one's work to meet personal needs (child care, schooling) and would open up needed part-time employment. One could also accumulate work credits in order to earn a sabbatical. Kahn posits that the benefits from the experiment might be improved self-esteem, broader self-development, and greater mental and physical health for the worker, along with higher productivity for the organization. To what extent the costs of the experiment would reduce or offset the gains could only be determined by trial and evaluation.

From Assumptions to Fact

We have had too much of assumption and stereotype. Management has accepted too long the assumption that every increase of specialization in a job represented a potential increase in production. Unions have assumed too long that they could prevent workers from being exposed to unreasonable hazards of physical strains, but not from being bored to death. And the larger society has assumed too long that there was no such thing as social-psychological pollution—that the effects of monotonous or meaningless jobs could be sloughed off as the workers went through the plant gates to home and community.

An experimenting society would approach the humanization of work by replacing such assumptions with facts, and by learning such facts through the familiar and unavoidable process of trial and evaluation. In this process industry, unions, and government could collaborate to the benefit of all.



WHAT DO WORKERS REALLY WANT?

By Robert Schrank



The author challenges the approach to job reform that is being widely proposed by social scientists and management experts. He suggests that most workers would prefer an enhancement of the "amenities" in the workplace not related to their jobs.

Robert Schrank is currently a project specialist for the Ford Foundation in the field of manpower development. He has had experience on both sides of the industrial world: as a machinist and union representative, on one hand, and as a plant manager and chief engineer, on the other. His article is abridged from *Industrial Relations*, a journal published by the University of California in Berkeley.

Recently, the U.S. Department of Health, Education, and Welfare issued a report titled *Work in America*, which summarizes one set of views concerning the current problems of the American job holder and his employer. To improve conditions in the workplace, this report recommends upgrading occupational status, more humane supervision, increased emphasis on work teams, and creation of more challenging and responsible jobs.

Among the problems with this report is that it suffers from gigantism. It deals with a universe of 84 million people—a spectrum which ranges from garbage collectors to ballerinas, from plumbers to neurosurgeons—and calls them all workers. The blue-collar sector alone covers employees in both coal mining and aerospace, two work worlds that have little in common. This homogenization makes thoughtful consideration of workplace problems extremely difficult and may conceal more than it reveals.

Despite this tendency toward overgeneralization, most of the interest among writers today—and the focus of this note—is on a little sliver of two percent or so of workers who hold mass-production jobs in manufacturing industries. Much of the present discussion about workplace problems tends to confuse a *job* with *work*. This is unfortunate because it hides the extreme variation of "work" and "nonwork" that occurs on various jobs. Amenities in the work place—a principal aspect of "nonwork"—are in my opinion the most critical factor in the job

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satisfaction of mass-production employees. Amenities are reflected in the amount of freedom one is permitted at and around the workplace—not the amount of freedom permitted in performing the job. The thesis developed here is that mass-production workers (and those who hold similar jobs) are less interested in improvements in the content of work than they are in better wages and benefits, job security, healthful and safe working conditions, job mobility, and the equalization of workplace amenities between themselves and white-collar workers.

Work in America suggests that everyone in the workplace is suffering from some degree of alienation. When Karl Marx first discussed alienation in 1844, he argued that mass production alienates man (literally, turns him away) from nature, from himself, and from his fellow man. The source of this alienation, Marx claimed, was rooted in the private ownership of the means of production. Because the individual worker had no control over his work, he became alienated.

While Marx sought to eliminate alienation by changing the ownership of property, writers today speak of increasing autonomy, job enrichment, and self-actualization within existing structures. Behavioral scientists who follow the tradition set by the early “human relationists” rarely refer to private ownership of the means of production as the source of worker alienation. Rather, they write about the lack of “ownership” of work in the sense that large numbers of workers in our society have little real control over the design and methods of their work, and they typically labor on only a small, specialized portion of the entire production process. These social scientists—who are heavily represented among the contributors to the *Work in America* volume—assume that all workers want to work and expect to gain intrinsic satisfaction from their jobs. Because our society holds that everyone should have a job, we confuse that dictum with the idea that everyone wants to work.

Alienation as a Human Condition

I believe this assumption is wrong. I am more and more moved to believe that the main reason many people work is because of the penalties for not working. Given an alternative (e.g., early retirement), an increasing number of individuals are taking it. This seems to be true in all the technologically advanced countries, socialistic as well as capitalistic. To the extent that workers are alienated, the sources of this alienation stem from the present state of the human condition in general and not merely from the problems connected with work. The workplace is only one arena where alienation is expressed, and to suggest that all human problems can be solved in that setting is naive.

I partially agree with the *Work in America* claim that managers as well as workers are alienated. Obviously alienation is a difficult phenomenon to measure, but to the extent that it exists, alienation affects

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individuals higher in the organization hierarchy than most social scientists suppose. Here the key issue is the sheer magnitude of corporate structures. Firms such as Ford, Union Carbide, Bell Telephone, or Westinghouse, are so gigantic that simply communicating with all the members in one of these organizations would be an insurmountable task. And if the top management of one of these corporations actually received inputs from all its managers, it would be totally inundated with information.

"Socializing" on the Job

I believe that managers and other white-collar workers have more outlets than blue-collar workers for their feelings of alienation. These outlets can be summed up in what I call "schmoozing" or "socializing"—the opportunity to move around the plant, leave for extended lunches, visit with fellow managers, etc. Take the telephone, for example. It is one of the most important instruments for socializing in our society, and the majority of white-collar and professional employees who become temporarily bored on the job can simply pick it up and take care of such nonwork chores as calling the service station to see if the car is ready, making a doctor's appointment, or just to have a conversation with a friend.

A major workplace problem relates to the differences in freedom between white-collar and blue-collar workers: weekly salaries versus hourly pay, and punching a timeclock four times a day as against breezing in at 9:30 a.m., strolling out at 5:00 p.m., and taking a two and a half hour lunch. Contrast tight production schedules with little or no productivity measurement, freedom to leave the workplace and return, and, above all, freedom to "schmooze."

Though white-collar workers take their amenities for granted, I believe they are a source of resentment among blue-collar workers despite the dramatic improvements in factory work brought about by collective bargaining. The big status leap in our society is from blue collar to white. The successful man in our culture is almost always wearing a tie, the major symbol of nonmanual work. The white-collar worker has made it out of the underclass. This status differential is critical to how people feel about their jobs; more important, it is a real source of dissatisfaction because it reflects a basic inequality in benefits and amenities.

When I was a young apprentice, if one were a skilled machinist, he had it made. But in today's society, the status even of skilled workers seems to be steadily declining. And this status differential is widening because the factory worker is better informed about other people's jobs and the amenities available to them. He has seen these jobs on television, and he may now have a brother or sister (or worse, a brother-in-law) who works in the white collar world. Thus, it seems to me

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that equalization of job amenities between white- and blue-collar employees could produce more job satisfaction for blue-collar workers than such schemes to increase worker "control" as job enrichment and autonomous work groups.

The Limits of Change

Prescriptions for improvements in the workplace such as those contained in the *Work in America* volume do not reflect the realities of mass-production technologies. What does not seem to be understood by behavioral scientists is that the goal of design and engineering in this type of technology is to achieve constantly diminishing tolerances. The smaller the deviations from the engineer's design, the more the organization can take advantage of the substitutability of labor and economies of scale. When work reaches the plant floor in a mass-production technology, it is ready for fabrication. Design and engineering have been completed. Materials have been chosen and ordered. The very limited decisions that can still be made have to do with sequencing or improving performance on a particular task.

Workers may possibly want to rearrange some of their tasks and duties. If they do and find the new arrangement better than the old, fine and good. But that should not be sold as autonomy, creativity, or self-actualization; neither should it suggest that workers will be happier, healthier, better adjusted human beings as a result. The most creative self-expression I have observed in a factory was to be found in the graffiti in the washroom and the horseplay during work breaks.

Actual control over the product is as alien to today's worker in both socialist and capitalist countries as it was in Marx's time. Assembly-line workers do not design automobiles and television sets or determine the process of manufacturing or what happens to the product when it is completed. That is the sort of control Marx believed would end alienation. It is unrealistic to claim that the worker will achieve any real control by the process of either rearranging tasks or adding to them.

A Role for Unions

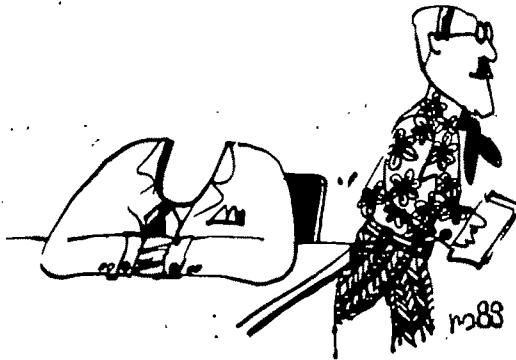
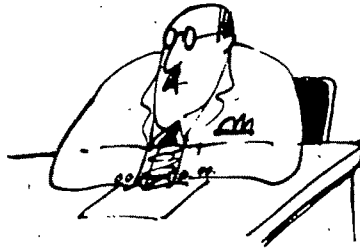
Given these constraints, what role can workers' participation in decision making play in mass production work? A most important form of worker participation in an organized plant is the union. There is a general tendency in the behavioral literature on job design to treat the role of the union as secondary to that of the content of work itself. Unions, however, have been improving conditions in the workplace for a long time by controlling speedups, eliminating the worst evils of piecework, establishing seniority on layoffs, paid holidays and vacations, workmen's compensation, health insurance, etc.

Most importantly, unions have given dignity to the individual work-

What Do Workers Really Want?

er. No longer does he have to grovel before management to maintain his rights and privileges. Freeing workers from an arbitrary punitive atmosphere may be the single most important factor in making life in the workplace more palatable. Because participative decision making, job enrichment, and autonomous work teams cannot be implemented to any large extent in mass-production technologies, the union may still be the best vehicle for improving the jobs of blue-collar workers.

The target areas for improvement ought to be around-the-job amenities which are typically given to white-collar employees. Since alienation and job dissatisfaction cannot be significantly removed from mass-production jobs through the variety of participative devices, it seems clear that management and unions should continue to collectively bargain for nontask-related factors which surround the job and make work more enjoyable. In sum, I am convinced that there is a high correlation between the amount of freedom a worker has on the job to do things which are not task related and his level of job satisfaction. The freedom to do things outside his task may represent a greater element of autonomy than any "enrichment" possible within his task.



THE LIMITS OF JOB REFORM

By Sar A. Levitan and William B. Johnston



Although they favor efforts to make work more interesting and challenging, the authors warn that the amount of reform possible is severely limited by the very character of industrial technology. They also suggest that the research currently cited to prove the success of job redesign is too sparse and selective to justify any wide-ranging conclusions.

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American industry has long been committed to the redesign of executive and professional jobs with a view to improving the quality of work. Recently this interest in the quality of managerial, professional, and high-level sales jobs has been extended to other white-collar workers. Sometimes reports on these experiments (as well as those involving blue-collar workers) imply and occasionally state that sweeping, even radical, job reform is in the offing. But is widespread job reform possible? Is it necessary? This article considers some of the limitations on job reform. But first let us examine a few recent experiments in job redesign.

In 1965, American Telephone and Telegraph Co. (AT&T) began experimenting with new job designs for clerical workers in an attempt to cut turnover and improve productivity. Analyzing the work of the office staffs, the job designers found most departments had compartmentalized and divided the work into essentially a paper-pushing assembly line. Few workers appreciated their work or took pride in their

accomplishments. The results were high rates of turnover, low productivity, and low quality of output.

To improve things, the planners analyzed the task to be performed: for example, processing orders for installing and repairing telephones, assembling yearly telephone directories, or billing customers. They reevaluated the division of labor based upon ideas of the overall job to be performed. Instead of having order-form clerks, typists, and bill verifiers, they assigned entire modules of work to individuals. Telephone book assemblers were given the entire job of processing and verifying a book or sections of a book. Billing clerks were given complete responsibility for certain accounts, rather than a single operation on each account. Along with job enlargement, the designers initiated changes in office layout and grouping of personnel, to facilitate communication among employees with related jobs.

Almost all of these changes had positive results. In many instances productivity rose and output was more prompt and error-free. The improvement in employee morale was often spectacular. Employees seemed to take pride in their new jobs and began to learn the jobs of those around them. Absenteeism fell sharply and turnover decreased in most cases.

The AT&T methods have been duplicated with a fair amount of success in a variety of companies and situations. A similar job enrichment program, for example, was initiated by Xerox for its technical representatives. Machine servicemen were given more authority to schedule work, order inventories, interview and train new personnel, and determine workloads. After an initial adjustment period, the company found that men in the enriched jobs achieved higher performance standards than managers had previously been able to command.

Factory Experiments

Work restructuring also has been tried in factories. The redesigners of blue-collar work have used two basic approaches—"participative management" and task reassignment—along with improvements in working conditions designed to minimize differences in status. In most cases, participative management has been favored because production technology allows little leeway in the delegation of tasks. On the assumption that even a dirty, dull, or unpleasant task can be made more acceptable if the worker has the responsibility for deciding where, when, and how fast it will be done, these plans have concentrated on developing a spirit of cooperation and teamwork on the job.

One of the oldest and most widely noted attempts at improving productivity through worker participation has been carried out at the Donnelly Mirrors Corporation of Holland, Michigan. The employees were divided into task-oriented teams that set production goals. The workers had the authority to control the pace of product assembly

and the assignment of jobs along the assembly line. In addition, all employees received weekly salaries, rather than hourly wages, and they collectively set the rates at which they would be paid. In return for this, the employees also had responsibility for implementing productivity increases to support pay raises. In essence, the production function was delegated to the men on the line.

Reported results were impressive. The quality of production jumped sharply, even though inspectors were cut by two-thirds. Scrap losses dropped by 75 percent from their former level and products returned by retailers amounted to less than a tenth of previous volume. Productivity gains have resulted in an average salary bonus of 12 percent since the changes were instituted. Wages have risen steadily while unit production costs have fallen, enabling the company to decrease prices, expand sales, and increase profits.

Donnelly's program is the most successful but not the only model of delegating responsibility to workers to increase satisfaction, productivity, and company profits. Other plans involving changes in job tasks (for example, from assembly line to benchwork production) and job rotation have been instituted by Motorola Corporation, Corning Glass Company, Texas Instruments, and General Foods. Each of these efforts has resulted to some degree in improved employee performance, morale, and productivity.

Gaps in the Case for Reform

These experiments with job redesign are all "success" stories. Indeed, most of the literature on work reform is the product of advocates reporting positive results. But there are major gaps in the case for job reform. Companies which find authoritarian controls and unchanged job rewards to be as successful as ever are not included in the surveys. Companies whose enrichment and participation plans turn sour rarely trumpet the news.

Furthermore, the productivity gains resulting from these projects are seldom compared against gains from alternative innovations, and have not been followed over long enough periods to be considered permanent. Some studies have reported that productivity can be improved by *either* autocratic or democratic changes in management style, as long as workers feel that management is interested in their jobs and responses. But the history of varied schemes to develop workers' sense of participation and support for corporate goals makes it clear that reforms which rely on the morale or attitudes of the work force cannot be guaranteed to last.

Just as today's young union members have little appreciation for the improvements in wages and working conditions won by earlier generations, so new workers in "humanized" plants may fail to appreciate the changes, since they were not working during the pre-reform

period. Those who were present when assembly lines were changed to benchwork, or those who remember the authoritarian supervision before the introduction of participative management, may appreciate the better conditions of their work. But even for them positive reactions resulting from innovations inevitably fade as novel systems become routines. And those recently hired are likely to see only jobs with certain tasks, wages, and bosses. This is, of course, no argument against making changes, but they should be made because of intrinsic merits and not because they will lead to everlasting rises in productivity.

Limits of Worker Involvement

Participative decision-making, profit-sharing, and autonomous work arrangements all seek to unite the individual's goals and the firm's. It is easy to see, however, that the goals of any sizable corporation and those of its employees are not easily harmonized. The ideal of communal effort in which a group of individuals are united by common beliefs to achieve a common aim is foreign to large corporate enterprises. The firm is interested in profits, with most other goals being measured by how they affect this single variable. The firm's employees, especially the production workers, are concerned with improving their lives, a goal only incidentally connected with the corporation's success and in part opposed to it because there is only one corporate revenue pie to be divided.

It has been suggested that the key to participative management is profit-sharing. But the results of profit-sharing, or even outright ownership by workers, would for any large organization be hopelessly diffused and diluted. It is doubtful that the marginal increase in income generated by full distribution of profits could do much to change workers' attitudes towards their jobs, or that a few shares of stock could do much to transform employees into members of the corporate "family." Overall, the total of all corporate after-tax profits would add less than 10 percent to employee compensation.

The idea of profit-sharing based on small production units suggests the basic goal of participative management. At bottom, all such changes seek to repartition industry into organizations of smaller size, where the individual does not get "lost." Autonomous work groups who make their own decisions and pocket their own profits would actually be tiny companies that have become subcontractors to the larger organizations. The breaking up of the corporation into small units may indeed be desirable from the standpoint of improving the quality of work, but it runs counter to the established principles of efficient industrial organization and is not usually conducive to optimizing profits.

Reformers not only challenge traditional ideas of work organization and supervision, but equally question the accepted rules for designing jobs and dividing tasks. They believe that work roles are not inalterably

defined by the technology of production. Within any given technological framework, they argue, there are equally productive alternatives.

Recognition that technology is not an absolute determinant of jobs does not, however, negate its dominant influence. Without question, technology, especially its hardware, is far and away the most important factor in job design. Milling machines, computers, forklifts, and arc welders determine what tasks will be performed, dwarfing in importance work arrangements or task assignments.

Enriching Jobs and Raising Profits

The capital investment required to significantly alter methods of production is awesome. If manufacturing jobs have hardened in molds cast generations ago, much of the reason lies in the physical plant and machinery accumulated over the years. Employers may be willing to experiment with innovations to improve working conditions because failure would entail little cost or risk. But changes that would require replacement of expensive capital are less appealing, particularly if managers cannot be assured the changes will lead to greater profits as well as better quality work. If changes in technology and hardware to improve the quality of work are to be made, they must also promise higher profits.

Champions of job enrichment have, of course, pitched their appeals to the profit motive. They urge that eliminating high turnover rates, raising product quality, decreasing waste, tapping firsthand knowledge for design innovations, and cutting manpower requirements are productive and profitable improvements. But even when changes in techniques and processes appear financially sound, there are other limitations to their adoption. For example, changes which are feasible in the production of small items may not apply to larger products. The widely heralded "benchwork" assembly methods involved products with small components, fairly lengthy assembly times, and few tools. But the inescapable problem of storing and moving large components means that assembling cars or refrigerators or engines probably can be accomplished most efficiently on a moving line.

At some point, suggestions for enriching jobs, increasing skills, lengthening job cycles, or rotating tasks come into conflict with the logic which dictated division of labor in the first place. Essentially, those who favor job enrichment would create more complex jobs with longer training times. But the present system favoring simple jobs originated as part of a long trend to greater specialization, which may be psychically expensive but is economically cheap. It is possible that in many industries jobs have become too specialized and that workers could produce more if they had more interest in their work. But it cannot be denied that division of labor, as Adam Smith argued two centuries ago, is an essential ingredient of efficient mass production.

The Limits of Job Reform

The return to craft production may be humanly desirable, but it is impractical. Every addition to jobs which requires workers to spend more time learning the job, or alternating tools, or which entails greater inventories or duplication of tools is likely to raise unit costs. The reactions of managers to suggestions which involve new production techniques or job realignments are therefore understandably cautious. Production methods have been developed not from the arbitrary decisions of engineers, or even as a result of the inevitable progression of technology, but in a rational search for efficiency in a competitive economy where efficiency is a prerequisite for survival. Although job rotation may hold some hope for relieving monotony, it is wishful thinking to ignore the inherent limitations on job design imposed by repeated identical operations.

Labor's Skepticism

On their part, many production workers and some union leaders have tended to view workplace reforms and enriched jobs with distrust. From the vantage point of the dissatisfied worker, management, as the instigator of work redesign, is suspected of perpetrating another elaborate ploy to convince the skeptical that a monotonous job is after all important or challenging or enjoyable.

The kinds of changes which could relieve these suspicions are not likely to occur as rapidly as supporters of job enrichment hope. Personnel psychologists may sweep through factories putting glass windows in the manager's office, unlocking executive toilets, taking out time clocks, and having the workers meet on company time to set their daily schedules. But when they finish, the same machines and hands will go back to cranking out coffee pots or card tables or cookie jars. As long as processes remain the same, job improvement for manufacturing workers will be partly just a new cosmetic on the same old crone.

Recognizing the costs involved in meaningful job reform, some reformers have argued that job enrichment should control the design of production processes, even if productivity is reduced. For example, the report on *Work in America* written by a group of mainly social scientists for the U.S. Department of Health, Education and Welfare suggests that "social efficiency" should be given priority over considerations of purely economic efficiency. The argument is that unrewarding, inhuman work has high costs in terms of social alienation, poor health, violent aggression, and other social ills. Enriching the work experience, even if it were economically costly, would be socially beneficial.

Conceptually appealing though they are, these arguments are hardly practical. Faced with a choice between satisfying its workers and maintaining its profits, a corporation could be expected to resist job humanization. Nor is there evidence of any social groundswell of

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sacrificial spirit, or willingness by industrial workers to lower their standards of living in order to have more satisfying jobs. Any retreat to more primitive, costly, and "human" methods of manufacturing would require the kind of governmental intervention likely to be rejected by both owners and workers.

Is it not more reasonable to assume that increased specialization and large hierarchical organizations are not accidents, but logical developments in a complex society seeking to support its growing population at an ever-rising standard of living? Whatever the price that society is paying in terms of "dehumanized" jobs in monolithic, faceless organizations, it is unrealistic to hark back to a simpler world in which organizations were small and jobs were large, as though the paradise lost could be regained. Specialized roles and specialized knowledge are essential to large organizations, and large organizations appear unavoidable in an advanced society.

Decline of Industrial Work Force

In making their case, job redesigners often use examples of workers on assembly lines in steel and textile mills, oil refineries, and machine tool factories. However, occupational data indicate that the collective importance of these workers is declining. Though they have serious job problems, these workers constitute a relatively small fraction of the expanding labor force. Moreover, the advance of technology allows more production with fewer men. For example, the entire oil industry requires but 200,000 production workers; and a handful of supervisors have managed to run the refineries during strikes. Thus, the most important effect of technical advance is that it shifts employment away from mechanized manufacturing processes to the jobs which are difficult if not impossible to automate—services and the professions.

Moreover, in discussing workers "trapped" in routine factory jobs, some workplace analysts often seem to see these workers as reflections of themselves: the descriptions of work sound as though the factories were filled with restless, inquisitive consultants chained to assembly lines. There seem to be no placid TV watchers, none who may be pleased with simple, repetitive tasks or high wages or long weekends. From such assumptions it is not difficult for these analysts to discover great reservoirs of alienation and to claim that profound changes must be made in work.

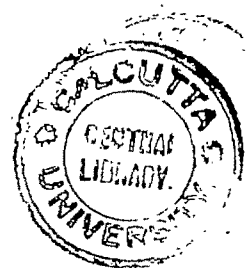
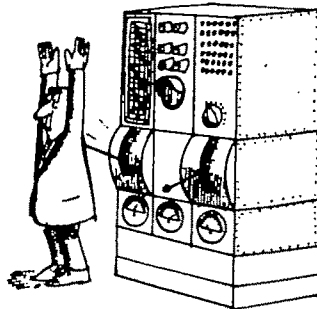
But whether in factories or in the service trades, the fact is that once tasks are determined they cannot be changed much. Basically, janitors sweep floors, secretaries type letters, and librarians keep books on shelves, no matter what surroundings or supervision they have. More than anything else, the job itself will determine how a person will react to it. Society's requirements have already preempted much of the leeway for designing jobs. Once the tasks to be performed have been

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determined, work designers may shuffle the tasks among people, or put white collars on them, but work can only be truly reformed by shifts in the aggregate demand for labor. All the varying of assignments, rotation of duties, recombination of tasks, or restructuring of organizations and supervisory methods cannot change the basic nature of the work to be performed.

As employment moves further away from production for survival to the provision of services, society should be freer to determine what work will be done based upon what people want to do. Man tends to attack the unpleasant or bothersome aspects of life first; thus, the worst work will steadily be eliminated or changed. In some future, perhaps, machines will allow everyone to work at meaningful jobs. Until then, however, work will probably continue to be organized in a way that makes it simple, easily learned, and that promotes greatest efficiency, and maximum production. Without the tremendous affluence generated in large part by efficient mass production, there would be no alternative life styles or occupations for workers to envy, and no time to invest in the education which has contributed to some workers' dissatisfaction with their jobs.

But the job reform results thus far indicate that substantial improvements *can* be made within the framework of efficient, profitable enterprises. The upgrading of work which can be realized from redesigned jobs may not promise nirvana for all workers, but it is clearly a change for the better. The various strategies for reinvolving alienated workers deserve to be tried, not because they can be expected to *solve* the problem of the workplace but because they are likely to raise in some measure the quality of work and of life. When these innovations come to represent the wishes of workers (rather than those of productivity-minded managers or well-intentioned consultants), they should be instituted. The egalitarian ideal of enjoyable work for all may be unattainable, but a just society should aspire to no less.



EDUCATION AND CAREERS

An Interview with Alvin Toffler



Alvin Toffler's *Future Shock* created a great stir of discussion and controversy when it was published in 1970 and translated into many languages. Mr. Toffler argued there that the capacity of men to adapt to the urban environment was being put in jeopardy by the unprecedented speed of social change. In the following interview, he suggests that educational systems around the world are doing a poor job of preparing young people for a fluid, technological society. And he proposes ways of bringing the classroom closer to the world of work.

Mr. Toffler has been an editor, correspondent and university lecturer. He has written about popular culture in *The Culture Consumers*, and has edited two volumes on education, *Schoolhouse in the City* and, in 1974, *Learning for Tomorrow*, a collection of essays by educators, psychologists and sociologists. His interview is reprinted from the Tokyo journal, *PHP*.

In your famous best seller, Future Shock, you outlined some of the weaknesses of current educational aims and practices. What would you say to parents who are trying to think through their position on education? What can they do concretely to give their children a good education and at the same time a training that will prepare them for life as it really is?

I would begin by saying that many of them should encourage their older children to drop out of school. Most parents are very upset when a child comes home and says, "I want to drop out of school." I don't think that parents should automatically assume that school is the best place for their child. It depends upon age, and it depends on the child's personality. For many young people, it is better not to go directly to college, for example, after finishing secondary school. They may be wiser to step off the conveyor belt of education and then get back on at some later date when they know what they want to do.

I believe that the educational system in the United States, Britain, France, Germany, Japan—all of the rich nations—is basically a system very carefully designed to produce people who will fit into an *industrial* culture. It does a very good job.

I visited a high school in Hokkaido, and saw young Japanese students bent over their desks, wearing their uniforms, working very hard, and being trained—not educated, but trained, though the educators call it education—trained to be good employees for Toyota, Seiko, Nikon, just as in the United States we try to train young people to be good employees of the U.S. Steel and Ford Motor Company. We still think that success in later life requires a great deal of obedience, a great deal of routine processing, that work will be boring, that work will be repetitive, that work will be difficult.

We also want young people to have a materialist value system because if the whole society shares a materialist value system—if success is pursuing the dollar or the yen, and we are all economic animals—then it is easy to control everyone. What is happening today is a profound revolution in education. All of these things are breaking up. Students are resisting the pressure for obedience. They won't accept the authority of their elders. They don't want to do routine work, they don't want to do standardized work, the same work as the next student, and they are at least questioning, if not in open revolt against, the idea that economics is the most important thing in life. I think that these tendencies among young people should be encouraged instead of resisted. But that makes it very difficult for professional educators who believe that they know what's best. I believe that most educators are very well-intentioned but that they do damage to the children they teach.

Combining Work and School

Don't some of the troubles stem from the fact that our schools are geared to professional training rather than to education? Isn't there a big difference here?

Well, sociologists look upon educational systems as tools for socialization—ways of machining the human being so that he or she will fit into the society. That is true among primitive tribes even more than it is true for us. But the question is whether this machining is appropriate, whether it is for the society that existed in the past or the society of the present, and whether it is an appropriate one for the future. I don't think it is worthwhile to spend a great deal of effort in trying to come up with a sharp definition of training as against education. They blend into each other.

How can you blend the two? We see that in present-day practice, the blend is not very well achieved.

I believe strongly that students should spend more time outside the classroom, that the time they actually spend in the school building should be reduced. I believe that it is valuable for young people to work,

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to have jobs—whether it is part-time work or summertime work or even full-time work for part of their career—even very young children. My father began working when he was 12 or 13 years old, and probably the fathers of many of us did. There was something maturing about that experience. We, with very good intentions, prevent children from working. We keep them in school, we keep them in the university, for longer and longer periods of time, and we think that we are doing them a favor—that we are doing something good for them. Then we wonder why they seem to be immature, why they seem to have no great sense of responsibility. I think that in this sense we all have something to learn from the Chinese.

I am not prepared to argue for sending our young people out to the fields, but I am suggesting that we ought to have alternative educational pathways. For example, many children who do not do well in school, who resist school, who hate school, nevertheless could make very useful contributions to the society and could have very happy and creative lives of their own if there were some alternatives. We have in our country—I speak now of the United States primarily—very limited opportunities for apprenticeship learning. And the apprenticeship programs we do have are purely for training. I would like to see apprenticeship programs open to all children, so that a child could leave the school and go to work for a carpenter, or go to work for an electrician, or go to work as an apprentice in an architect's office, and connect that with the classroom at the same time.

Won't you have problems if you allow children to go to work?

Of course. For one thing there are certain profound economic problems about this, because our school systems are really ways of keeping young people out of the labor force. The social structure is not designed to accept large members of young people in the labor force. That is why all over the West and in Japan we have continually raised the age of compulsory school attendance. We have always said that this was raising the level of civilization and improving the life of the young people. Well, it is a way of keeping them in what amounts to an academic prison and keeping them out of the economic system longer. So I think we are going to have to make some very radical changes in the economic system to permit large numbers of young people to work, even if it is not at the regular wages. Here the trade unions become concerned. But we need to have some system which makes it possible for young people to work while they learn, to combine work and learning, and to be paid something if not the full amount during that period.

The other controversial argument I would make in connection with this is that the same thing applies to old people. What we have done in our civilization is kept the young in school and extended childhood,

then at the other end we have retired older people at a younger and younger age. Now what this does is create in the society two very large groups—a group of the young and a group of the old—who are basically alienated from the society and kept out of the center of control. People need the respect of the society. And people only get the respect of the society when they produce something that the society thinks is valuable. But students are regarded as not producing anything and therefore not important. We say to them, “We love you and some day you are going to be powerful.” That is what we say with our mouths. But the reality of the situation is that we have no respect for them. And they feel that keenly, I think, in their psychology.

In America we have had the issue of racial integration—or rather, the problem of the failure of racial integration. We now face in addition the problem of generational integration. Unless we can find some ways of integrating the generations into the system, we will have the same kind of political explosions that we had with racial integration.

Educating for the Future

What would you say then is the purpose of education? Where should it be leading? In your book Future Shock it seemed that you were quite concerned about the rapid changes going on and you saw education at that time as preparing people to cope with the rapid changes, to adapt readily, to understand what's going on around them. Do you still see it that way?

Oh yes. It seems to me that we are in a race between limited human abilities and increasing complexity and danger in the physical and technological environment. Every time we introduce some new system or some new machine, every time we reorganize a government department or a corporation, what we are doing is making the environment more complex. And there is only so much complexity that we can deal with.

Now there are two ways of dealing with the situation. One is to control the change through controlling technological development, through thinking very carefully what changes we want to introduce into the system, and so on. The other is to use education as a way of enhancing adaptability. We haven't yet reached our biological limits. I think we have reached our psychological limits, however. They are imposed by the culture.

We face a chaotic environment, a very rapidly changing, kaleidoscopic environment, and yet the education or the training that we have provided until now has prepared us for a much less irregular environment, for a more routine one. So, as I say we can do two things—either reduce the degree of complexity in the environment or increase the individual's ability to perceive both these things. We need to introduce the future to education.

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How, concretely, do you suggest this be done?

Concretely, you make them think not only of future events in politics, economics, and business, but of the future of their own lives. I have just completed editing a book called *Learning for Tomorrow*. It is a collection of essays by psychiatrists, psychologists, other experts and myself on the concept of the future in education. The schools have been very backward and have always divorced the students from their own future.

Let me give you an example of what I mean by this. Sometime ago I gave some children little pieces of paper and I asked them to write down seven events that would happen in the future. Being intelligent and very sophisticated they produced a list that was incredible. They talked about rapprochement between China and Russia in 1987 and computers in every classroom in 1978. They came up with events that are going to happen in the future. And they even put a date on each one. But one of the things that I noticed is not one of them said what was going to happen to *them*. It was all external, objective. So I then gave them back fresh sheets of paper and I said, "Now write seven things that are going to happen to *you*." And they wrote, "I will be married when I am 22. I will have 1.8 children. I will live in the same neighborhood I do now. I will have a dog."—all the things that indicate their lives *will not* be changed at all by the events that are going to be changing the world.

Now an education system that teaches this to children is hurting them because you cannot have massive changes in the world scene without changing the way of life of the individuals as well. These children were highly sophisticated and intelligent compared with most children today. They went to the finest schools and were very future-oriented. And yet they could see no connection between the changes out there and the changes in their own lives. I think that is extremely dangerous. So I believe that it is important for schools to begin to design ways for children, even at a very young age, to talk about the future—their own hopes, dreams and images, even if they are foolish, even if they are childish. They should be encouraged to think this way and then an attempt must be made to connect the picture of the objective changes in the world with the picture of their own internal changes.

It is not just a question of what their occupation will be, what job they will have—although that is a difficult enough question for young people. But more generally what kind of life do they want to have? What will they mean by friendship in the future? If they want to have friends, what will that mean in terms of mobility? If they want to have a stable marriage, can they have one in the kind of society that we are now producing? What kind of future do they want in terms of career, in terms of aesthetics, in terms of sex, in terms of beauty, in terms of all of these things? These are questions that youngsters are hungry to talk about, yet they have had very little opportunity to do that.

Education and Careers

So in other words you see education moving more toward these human things—or at least it should move more toward these human elements.

Well I think this is so, but education is not or should not be a struggle between what the educators call the cognitive and the affective. In the past 50 or 75 years our schools have been almost exclusively concerned with cognitive education and foolishly unconcerned about the other side of it. I am not in favor of an education which throws out the cognitive element. I want children who will be well-educated, who will know a great deal about the world, who will be able to tell you a lot about whatever happens to be important to their time—whether it is politics or technology or physics or medicine or carpentry. But I also want them to connect that learning with their viscera and I think that we are going to have to design a system which permits this. To me, encouraging children and young people to work outside the classroom, to get involved with the community, to have a job or to conduct political activity, or to work as a volunteer in a hospital, are all very important steps to learning and perhaps more important than what they get in the classroom. A properly motivated person can learn anything he wants to learn without sitting in a classroom.

Let me return to your ideas about “dropping out” and then going back to school. How would that work?

Some have suggested a voucher system, so that you can go back to school when you want. You see, the present educational system is based on certain assumptions which are now no longer true. For example, the assumption that you are probably not going to live to be 70 or 80 years old but that you are going to die young. The assumption that there is a fixed body of knowledge to be learned, and that once you have learned this fixed information you can then use it for the next 50 years because the world is going to stay the same.

Well, clearly that is no longer the case—if indeed it ever was. And therefore, there have been several different kinds of proposals about restructuring education. One of them is the voucher proposal—that each child at birth be given in effect certain economic credits which can be spent for education at any time during that individual's life, until death. So if you don't go to school at this age you may want to go at a later age and at least the economic possibility exists.

So you are not proposing that we do away with schools?

I am not proposing that we do away with schools. I am proposing that we invent many alternatives so that a child has his choice of going to school, or getting a good education as an apprentice, or perhaps

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getting an education directly through working, or in some other way. For example, I suggest a system that I call "mentorship." It can be worked either in conjunction with the school or independently of it. I have students who want to come and study with me. I am not a professor, not a teacher, but I have done work in the field, and there are people who would like to learn from me. I think that would be just as valuable as sitting in a classroom learning from a sociologist or psychologist.

I think that even when students are in school, they ought to be connected with adults outside of their own family in the community. For example, when I was young I knew I wanted to be a writer. I grew up in New York. New York was then the publishing capital of America and probably had more writers per square inch than any other city in the world—writers, novelists, playwrights, advertising men, journalists, public relations people, broadcasters—people who use the word. I knew from the time I was seven years old that I wanted to write, but I never was introduced to a writer. I went through my entire college career before I ever met anybody who actually made his living writing, even though I was surrounded with them. Now that to me is stupidity on the part of an educational system.

So, I believe it is possible for schools to create what might be called a "mentor corps"—to select several thousand people in the community—accountants, doctors, electricians, plumbers, writers, every conceivable occupation. And when a child expresses an interest in a particular field, take him and introduce him to that adult and make an arrangement under which that adult is willing to set aside two hours maybe once a month, maybe once every two months, or even once every three months, but an opportunity when that child can talk to that adult, go to the office or to the shop and just sit around and observe and talk.

What would happen is that first of all children would have a much clearer idea of what the occupation they are interested in really is like. But second, I think frequently you would find that they are not talking about the occupation at all, but are beginning to talk more generally, and that you are going to have a transmission of values back and forth between the generations which is now pretty much nonexistent, or reduced.

We say in the United States that except for parents the only adults who talk to young people are those adults who are paid to talk to young people—probation officers, ministers, teachers, psychologists and so on. Young people almost never have an opportunity to meet and talk with adults outside their own family. And members of their own family are frequently the worst people to talk to because they can only talk to them in a very unbalanced or authoritarian way.

What could you do though if you were in the shoes of these people—the young person or the parents up against a society and an educational system that want to perpetuate a rat race?

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Well, I think it is quite clear that the *industrial* society is at the end of its tether—a phrase H.G. Wells used many years ago—that it is already dying. Our schools are busily producing children to fit into a world that is not going to exist when those children get there. I don't think industrial society should be written off as a tragedy for the human race, because in fact it was a great liberation for the human race. But we are now ready for the next stage of liberation. And that will be in my view a very non-industrial society. It will be a *technological* society, not an *industrial* society. We have to make a distinction between these two.

An industrial society is one which uses machines to standardize, to make everything and everybody the same, that depends on a materialist value system. You have this society in the Soviet Union, the United States, Japan and the industrial countries. It organizes life, schools, corporations and hospitals in a very hierarchical fashion with the orders basically coming from the top down, although sometimes this is disguised and made to look as if the orders were coming from the bottom.

It is now clear that we can no longer extend it. We are running into resource limitations, energy limitations, and food supply limitations, and we are facing limitations which I would call psychological limitations. I don't think we can maintain our sanity in the kind of society that now exists because the institutions of this society are mismatched with the needs of the people in the society.

And so I think we must look forward to a generation of extremely "radical" political change. That doesn't mean "leftwing" change or "rightwing" change because I think both of those phrases are empty of meaning. But I think we are going to have to restructure all of our governments—not just in the United States, but in all the parliamentary democracies in the industrial world. In America, the Congress, the Presidency, and the Constitution will all have to be restructured. All of these I think are going to have to be redesigned in the next 10 or 20 years.

If we are thoughtful about it we can move toward a technologically based civilization which will also be a humane civilization, a democratic civilization, and one which has room in it for a high degree of diversity. I believe that the new technology not only makes this possible but actually encourages it. I think that once we break out of the primitive technologies we have used until now, we can select technologies, like cable and cassette television, which encourage differences and diversity rather than uniformity among people. And by selecting our technologies carefully, and then being willing to make rather radical changes in our political systems, our educational structures, and the corporate system, we can arrive at something that will look, from our standpoint, remarkably like a utopia—but which no doubt to the citizens of that future time will also be an unhappy arrangement.

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The Problem of "Credentials"

Who can do this? Who can bring this change about? Is it going to be brought about by the young people themselves not going to school anymore and getting more experience through travel, work, and so on? Or is it going to come about through the schools changing—should we work on getting the schools and the curriculums changed? Or must we also change the businesses and the industries?

As far as the strategy for changing education is concerned, I think the central point of pressure must be on the corporations' employment offices. So long as we permit corporations to hire by diploma, we freeze our school system. Colleges then say they must prepare students for the corporation; secondary schools that they must prepare students for the colleges; and the nursery says they have to prepare them also. So, everything is frozen by the practices of corporations.

In the United States we now have federal laws against discrimination in employment based on race, sex, or religion. I would consider making it illegal to hire on the basis of diploma. Because this is a very pernicious, destructive practice. Even though businessmen think that it is efficient, from a long-term point of view it is highly inefficient, even for them. I think that an individual should have the right to establish his or her competency, and that the way that competency was achieved is no concern of the employer. If you can do the job, it should not matter to the employer how you learned to do it. Maybe you learned in your own garage. Maybe you learned by working in a laboratory. Maybe you learned by going to school. If you can do the job you should have the job, and it should not be dependent on whether you have a piece of paper from a university.

Would you allow for some kind of a license? A man can't just show up at a factory and say I am a scientist. You have to have some credentials.

Of course. I wouldn't want my brain surgeon operating on me without some accreditation. But clearly that sort of accreditation is required for a relatively small range of occupations.

And it can come from other sources.

For example, the Arthur D. Little Corporation, a major research "think tank" in Cambridge, has applied to the State of Massachusetts for the right to grant graduate degrees. They would then be able to hire young people and grant them a degree if they do the work.

Look at it practically. In Japan, as in France and in other countries, and alas, increasingly in the United States, you have to have

a degree to be a journalist. And yet I think that is absolutely absurd. I don't think the school should be giving degrees to journalists! I worked as a journalist, but I never took a course in journalism in my life.

Chances for Improvement

Do you think it is possible for people to achieve a better life—in the schools or out of them?

Surely, if we don't destroy ourselves through some economic catastrophe, or nuclear catastrophe, or pollution. I am basically optimistic about where we can go. But I am also a pessimist. I do think that we have the possibility of producing a better way of life, a better alternative to the present. I am not sure that we won't hurt excruciatingly before we get there. All the evidence to me is that our society is out of control: that the people who are manipulating the international currency system haven't the faintest idea of the consequences of their action; and that the United States government when it decides to put an export embargo on this, or the Japanese government when it refuses to liberalize that, haven't the faintest idea of what they are really doing.

This is not just true in economics. It is even more true in technological development, in education and other social developments of one kind or another. The society has changed so rapidly, has become so complex, that those who are nominally in power are really powerless, and therefore the system is out of control in many, many respects. That is why I see a connection between the breakdown of the Japanese commuter transport system, or the breakdown of the postal system in Italy, or the breakdown of the education system in New York. All of these are part of an overall pattern of breakdown, which is the result of social attitudes and political institutions that were not intended to cope with accelerating change and its consequences, the incapacity to adapt which I have called "future shock."

The question is what we make out of the new society, and how quickly we are willing to make the really "radical" changes that are required. If we are not prepared to be "radical"—and I have to be very careful in using that word because most people interpret it to mean leftwing, but it is in my view conservative; I prefer the word "dramatic"—if we are not prepared to make some dramatic changes, then some dramatic changes we don't like will be made to us.

THE IMPACT OF AUTOMATION

By Daniel Bell

The term "automation" refers not just to complex machines, but self-correcting instruments that control the operations of other machines. Here Professor Bell examines the fears and hopes generated by this major economic trend, and outlines some of the changing life patterns it has already begun to produce. His article is excerpted from an essay on "Work and Its Discontents" included in his book, *The End of Ideology*. This essay, written originally in 1955, has acquired the reputation of a "modern classic" in its field.

Formerly the labor editor of *Fortune*, Daniel Bell is now professor of sociology at Harvard University and one of the outstanding social theorists in the United States. He has written books on American socialism, the reform of university education and, most recently, *The Coming of the Postindustrial Society*, a widely-discussed attempt to chart the radically new social order of the future.



In the history of human hopes and longings, the polar images of Utopia and Arcadia keep recurring. Men have always looked forward to some golden future or back to some golden past. More than two thousand years ago Aristotle predicted that slavery would disappear when looms would weave by themselves, for then the chief workmen would not need helpers, nor masters slaves. The romantics, however, would have none of these visions. In Samuel Butler's version of utopia, *Erewhon*, inventions were prohibited. During the Gothic revival, it was the primitive that was ennobled: to shoot, to trap, to chop trees, to hold a plow, to prospect a seam—these were the virtues of work.

Today we stand at a point where those utopian hopes and nostalgic longings seem to converge. While the assembly line brought the work to the workers, tending to grip them bodily to the rhythm of the line, the vast development of automatic controls and the continuous flow creates the possibility of eliminating the workers from production completely. On its present scale and complexity, the continuous-flow innovation dates back only to 1939, when Standard Oil of New Jersey and M.W. Kellogg Company erected the first of the oil industry's great fluid-catalytic crackers. In these new plants, the raw material, fluid or gas, flows continuously in at one end, passes through intricate

processing stages, and debouches in a 24-hour stream of products at the other. The whole plant is run from central control rooms by a few men at the control panels, while mobile maintenance crews take care of any breakdowns.

Precursors of Automation

This new industrial revolution is symbolized in the word "automation." The term itself was coined in 1948 by the engineering division of the Ford Motor Company to describe the operations of some new "transfer machines" which mechanically unload the stampings from the body presses and position them before machine tools that automatically drill and bore the holes for other parts to be inserted. The purists among the engineers dismiss the Ford process as "advanced mechanization," or grudgingly call it "Detroit automation." For them the term "automation" is reserved for processes in which high-speed, self-correcting (i.e., feedback) instruments control the operations of other machines. (A toaster, for example, is *automatic*, but it follows a pre-set cycle of operations, and cannot adjust for variations; whereas an "*automated*" machine, by feedback, corrects itself for variations.)

Automatic devices are quite ancient. The Romans had a hydraulic float valve to regulate the water level in their storage tanks. The Dutch used such devices to keep windmills facing into the wind. The Scotsman James Watt devised a "flyball governor" to keep his steam engine clacking at constant speed. Quite ingeniously, the old Yankee flour mills of 150 years ago operated with true "automation" principles: the grain from wagons was unloaded into a hopper where, after being mechanically weighed, it was carried by a screw-type conveyor and bucket elevator to the top floor; there, by force of gravity, the grain flowed into hoppers which regulated the amounts fed into the millstones; the ground grain, now flour, was sifted mechanically through screens into barrels and conveyed away by barge or wagon.

Machines Replace Men

Whatever the claims of the ancients, what is new today is the simultaneous introduction of many different processes whereby direct human labor has been eliminated and mechanical or electronic devices regulate the flow of work. These processes are of four orders:

(1) *Continuous flow or automatic handling operations*, such as in the oil refineries or in the new engine-casting plants. Here the worker is a dial adjuster, maintenance man, skilled repairman.

(2) *Data-processing systems*, or the use of giant electronic "brains" (computers) which can store millions of bits of information and select the required item in a fraction of a second. The United States Steel Corporation has installed a data-processing system whereby incoming orders are simultaneously translated, through tapes, into production,

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scheduling, traffic, and shipping orders for the relevant plant; into volume and income information for the company's operating and financial records; and into billing and invoicing.

(3) *Self-correcting control devices* which "instruct" machines through punched tapes, very much like the ones in old player-pianos. An automatic lathe developed by the Arma Corporation, through punched-tape instructions, machined a workpiece in four minutes to tolerances of 0.0003 of an inch, which normally was machined in 30 minutes by a skilled machinist working with drawings. A concrete-mixing plant, in use by the Cleveland Builders Supply Company, loads onto ready-mix trucks any one of 1,500 different mixing formulas. A punched card, coded for the formula, is inserted into an electronic control panel, and the desired mixture is delivered by conveyors onto the waiting truck.

(4) *Automatic assembly.* Admiral Corporation and several other major electrical manufacturing companies have machines that can "spit out" completely assembled radios. A machine called Autofab, produced by General Mills, will put together in one minute the number of electronic units that previously took a worker a full day to assemble.

While some of these plants resemble the image of the "robot factory" which science-fiction writers have conjured up for decades, they are still one step away from "true" automation. Today, fully automated assembly is possible only when a large output of a single product is called for. But such inflexible, single-purpose machinery is too costly for medium or short production runs, and consequently the adoption of such machines tends to "freeze" the design and the technological stage of the product. True automation, as envisaged by Eric Leaver and John J. Brown, would design products in terms of a multi-purpose machine, rather than a machine for each product.

If such machines ever were produced, they would create a revolution not only in technology but in aesthetics as well. The concept of what a radio or a stove should look like, for example, might have to change drastically. In the first industrial revolution, fixed aesthetic habit dominated the design of a machine. When, in the famous Crystal Palace Exhibit of 1851, iron was introduced for the first time into construction other than machinery, the first structures and artifacts, true to the predominant imagination, were ornamental and baroque rather than utilitarian. Only gradually did the "modern" emphasis—that the form should express, rather than hide, the function—gain the upper hand. Yet, although the designer is no longer conservative, the engineer is. It is easier for him to create single-purpose automatic machinery that can produce quick, spectacular results. But the adoption of these expensive machines will only delay the coming of the flexible automatic machines, capable of turning out a wide variety of products, and producing a true machine revolution.

Fears about Automation

A number of people have conjured up wild fears about changes that automation may bring. Norbert Wiener, whose book on "cybernetics" was responsible in part for the vogue of "communication theory," pictured a dismal world of unattended factories turning out mountains of goods which a jobless population will be unable to buy. Such projections are misleading. Even if automatic controls were suddenly introduced, regardless of cost considerations, into all the factories that could use them, only about eight percent of the labor force would be directly affected.

It is evident that automation produces disruptions; and many workers, particularly older ones, may find it difficult to ever find suitable jobs again. It is also true that small geographical pockets of the United States (and other industrialized nations) have found themselves becoming "depressed areas" as old industries fade or are moved away. But it is unlikely that the economic effects of automation will be any greater, in the long run, than the social disruptions which follow shifts in taste, or substitution of products, or changes in mores. The rise of a functional style in architecture, for example, has meant a decrease in the ranks of brick masons, plasterers, painters, and molders. The substitution of oil for coal has cut in half the required number of miners. The fact that young people now marry at an earlier age has produced a sharp slump in the textile and clothing industries, for marrying earlier means that one dresses up less, dresses more casually, and spends more of the family budget for house and furniture.

Impact on Society

Automation, in turn, will have enormous social effects. Just as factory work impressed its rhythms on society, so the rhythms of automation are giving a new character to work, living, and leisure.

Automation is changing the basic composition of the labor force, creating a new *salariat* instead of a *proletariat*, as automatic processes reduce the number of industrial workers required in production. In the chemical industry, for example, output rose, during a seven-year period, over 50 percent, while the number of "blue-collar" workers increased only 1.3 percent. At the same time, the number of non-production workers, that is, professional, supervisory, clerical, and sales personnel, increased by 50 percent. The ratio of production workers to non-production workers dropped from 3:1 to 2:1, and this trend is likely to continue.

In its most important consequence, the advent of automation means that a corporation no longer has to worry about a large labor supply. This means that new plants can be located away from major cities and closer to markets or to sources of raw materials and fuels. The Sylvania Electrical Company, for example, which has 43 plants, built several

recent ones in such out-of-the-way places as Nelsonville, Ohio; Burlington, Iowa; and Shawnee, Oklahoma. The company has also insisted that its plants be smaller, and it placed a limit of 700 on the number of persons to be employed in a plant. In this way, the corporation can exercise new social controls. The works manager can know all the men personally, and the social divisions of such small towns will recapitulate the social gradations in the plant. Under these conditions a new manorial society may be in the making.

Changing Life Patterns

The decentralization of industry may equally revolutionize the social topography of the United States as a whole. As new plants are built on the outskirts of towns and as more and more workers live along the radial fringes of the spreading city, the distinction between the urban and the suburban gradually disappears. Instead, we increasingly find one scenery, standard for town, suburb, countryside, and wild, resembling what the editors of the British *Architectural Review* have called "subtopia."

But more than topographical changes are involved. The rhythms of life are changing as well. The major economic fact is that, under automation, depreciation of machinery rather than labor's wages becomes the major cost. And when labor is relatively cheap, it becomes uneconomical to keep an enormously expensive machine idle. To write off the high capital investment, more and more of the automated plants are expanding shift operations in order to keep the plant running 24 hours a day. And so more and more workers find themselves working "out of hours."

In such work communities, the rhythms of sleeping, eating, social, and sexual life become skewed. A man on the regular eight-to-four shift follows a cycle of *work, recreation, and sleep*, while during the same day the fellow on the four-to-twelve shift is on a cycle of *recreation, work, and sleep*, while the night man goes through his 24 hours in *sleep, recreation, and work*. Where this occurs, friendship patterns change abruptly. When the wife and children follow a "normal" routine while the man sleeps through the day, home and sex life become disjointed.

This breakup of the workday—and why should men work while the sun is shining; the practice is a relic of rustic days—is accentuated by a different aspect of the changing economic pattern of the country. As incomes rise and hours are reduced, more and more families spend increasing amounts of money on recreation and travel. This rising demand for entertainment and services—for hotels, motels, vacation resorts, garages, theaters, restaurants, television—requires more individuals to work "out-of-hours"—evenings and weekends—in catering to these desires. In the next decade, perhaps a fourth or more of the labor force will be working special hours. The multiplication of such

special work groups, with their own internal life and modes of recreation, is one of the features of a consumer-oriented culture.

For the individual worker, automation may bring a new concept of self. For in automation men finally lose the "feel" of work. Whatever the derogating effects, the men who use power-driven tools sense these instruments, almost as in driving an automobile, as an extension and enlargement of their own bodies, their machines responding, almost organically, to their commands and adding new dexterity and power to their own muscle skills.

As a machine tender, a man now stands outside work, and whatever control once existed by "setting a bogey" (i.e., restricting output) is finally shattered. As one steelworker said, "You can't slow down the continuous annealer in order to get some relief." With the new dial-sets, too, muscular fatigue is replaced by mental tension, by the interminable watching, the endless concentration. (In the Puritan morality, the devil could always find work for "idle hands," and the factory kept a man's hands busy. But that morality ignored the existence of the fantasy life and its effects. Now, with machine-watching, there will be idle hands but no "idle minds." An advance in morality?)

Some Gains

Yet there is a gain for the worker in these new processes. Automation requires workers who can think of the plant as a whole. If there is less craft, less specialization, there is the need to know more than one job, to link boiler and turbine, to know the press and the borer and to relate their jobs to each other.

Most important, perhaps, there may be an end, too, to the measurement of work. Modern industry began not with the factory but with the measurement of work. When the worth of the product was defined in production units, the worth of the worker was similarly gauged. Under the unit concept, the time-study engineers calculated that a worker would produce more units for more money. This was the assumption of the wage-incentive schemes (which actually are output-incentive schemes) and of the engineering morality of a "fair day's pay for a fair day's work."

But under automation, with continuous flow, a worker's worth can no longer be evaluated in production units. Hence output-incentive plans, with their involved measurement techniques, may vanish. In their place, as Adam Abruzzi foretells, may arise a new work morality. Worth will be defined not in terms of a "one best way," not by the slide rule and stop watch, not in terms of fractioned time or units of production, but on the basis of planning and organizing and the continuously smooth functioning of the operation. Here the team, not the individual worker, will assume a new importance; and the social engineer will come into his own. And work itself?

The Future of Work

In Western civilization, work, whether seen as curse or as blessing, has always stood at the center of moral consciousness. "In the sweat of thy brow," says Genesis, "shalt thou eat bread." In the Protestant conception, all work was endowed with virtue. "A housemaid who does her work is no farther away from God than the priest in the pulpit," said Martin Luther. With Swiss Protestant reformers Zwingli and Calvin, work was connected with the joy of creating and with exploring the wonders of creation.

In the 19th century, beginning with Thomas Carlyle, man was conceived as *homo faber* (man the maker), and human intelligence was defined as the capacity for inventing and using tools. Karl Marx wrote that man will be free when "nature is his work and his reality" and he "recognizes himself in a world he has himself made." In the same vein, John Dewey argued that a man "learned by doing," but the phrase, now a progressive-school charade, meant simply that men would grow not by accepting prefigured experiences but by seeking problems that called for new solutions. ("Unlike the handling of a tool," said Dewey, "the regulation of a machine does not challenge man or teach him anything; therefore he cannot grow through it.")

All these are rational conceptions. In Western history, however, work has had a deeper "moral unconscious." It was a way, along with religion, of confronting the absurdity of existence and the beyond. Religion, the most pervasive of human institutions, played a singular symbolic role in society because it faced for the individual the problem of death. Where death was but a prelude to eternal life, hell and heaven could be themes of serious discourse, and domination on earth had a reduced importance. But with the decline in religious belief went a decline in the power of belief in eternal life. In its place arose the stark prospect that death meant the total annihilation of the self.

Such fears were staved off by work. Although religion declined, the significance of work was that it could still mobilize emotional energies into creative challenges. (For Tolstoy, work was a religion; A.D. Gordon, the theoretician of the co-operative communities, preached redemption through physical labor.) One could eliminate death from consciousness by minimizing it through work. As *homo faber*, man could seek to master nature and to discipline himself. Work, said Freud, was the chief means of binding an individual to reality. What will happen, then, when not only the worker but work itself is displaced by the machine?

DOES LITERATURE HAVE A FUTURE?

By Norman Podhoretz

Lately, voices have been raised announcing the impending death not only of the novel and traditional verse, but of literature itself. Books and print, a number of avant-garde critics have said, are becoming obsolete, and will inevitably be replaced by other forms of communication. Mr. Podhoretz here examines these often gleeful obituaries, but finds them highly premature.

Norman Podhoretz is editor of *Commentary*, one of the liveliest intellectual journals in the United States, and a practicing literary critic. He is the author of the autobiographical *Making It* and a collection of essays, *Doings and Undoings: The Fifties and After in American Writing*. His article is reprinted from *Saturday Review / World*.



The first question to consider in thinking about the future of literature is whether literature has any future at all. Fifty years ago T.S. Eliot said that the novel was dead, but he did not say that literature was dead; he said that a particular form of narrative art which had developed in response to needs and purposes of a particular age would "no longer serve" and that another form would therefore inevitably be taking its place. Similarly, when in the 1930's Edmund Wilson declared that verse was a "dying technique," he did not mean that poetry was disappearing; indeed, he explicitly argued that poetry would go on being written, but in modalities other than verse.

Today, however, we hear it said on all sides that literature itself—not a particular form or genre but the entire "medium" of structured verbal discourse—is finished, obsolete, through. Print, we are told, will be unable to survive the competition of television and of the technological marvels already being prepared for the "delivery" of entertainment and information. Some day soon we will all be equipped with machines which at the flick of a switch can serve up any film, lecture, or encyclopedia entry we may choose. In this technological context, books will become as obsolete as hand-lettered parchment scrolls, and print will be confined to a bare minimum of strictly utilitarian functions.

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The eyes of those who accept this vision of the future perceive its outlines already taking shape not merely on the drawing boards of the engineers but in the minds and hearts of the young. This new generation, though the best-educated of all generations the world has ever seen (or so those who have reared and educated it modestly persist in claiming), care less about books than about films, less about reason than about feeling, less about words than about images, less about high culture than about low. In this, it is alleged, they are already "tuned in" to a future in which literature will simply cease to exist.

What are we to make of these prophecies? Are they true? The possibility cannot be dismissed out of hand. Certainly the technology on which they depend is there, or is on the point of being developed — though doubts can still be entertained as to whether it will ever be economically feasible to wire every household into the central systems of distribution.

In the meantime, while print is supposed to be growing obsolete, more books than ever before are being published and sold and (presumably) read. Far from declining, the publishing business is booming, with paperbacks especially now rolling off the presses in unprecedented numbers and being distributed through every conceivable outlet. Not so many years ago, books were hard to find in the United States; today they are hard to escape. There is no town so small nor hamlet so remote that it does not offer an astonishing number and variety of books for sale at relatively reasonable prices. In what sense such a situation can be interpreted as a portent of the obsolescence of print baffles the mind.

Youth and the Counterculture

But what of the youth? Certainly books are the last thing one associates with those hordes of young people who flooded the landscape of the 1960's and dominated its consciousness. One heard that they did occasionally read: the novelists Hermann Hesse and Kurt Vonnegut, the radical philosophers Norman Brown and Herbert Marcuse, the *I Ching* and the *Kama Sutra*. But one also gathered that these favored exceptions were valued precisely to the degree that they were literary assaults on literature, subverters as it were from within, celebrators in discourse of the nondiscursive, apostles of the non-verbal spreading their gospel in words. In any case, it was agreed by all who spoke for the young, who relentlessly told us what "they were trying to tell us," that books were not their "thing."

One wonders, however, how representative these highly publicized young people, who either belonged to or fellow-traveled along with the counterculture, were of their own generation, let alone of the generations to come. The media said they were *the* young, and everyone believed the media, and yet in the 1972 U.S. presidential campaign, Richard Nixon carried 50 percent of the youth vote against George McGovern, who had been expected by all the spokesmen to carry the whole genera-

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tion. Evidently at least half of that generation did not identify itself in any way with the counterculture. And if they did not stand for their own generation, neither did the young of the counterculture represent the wave of the future.

We are less than halfway through the 1970's, and already the counterculture has faded from the scene. It has left its mark and its legacies, most vividly in the area of sexual mores, but almost everything about it now seems dated. More and more the counterculture looks like the product of a unique moment in history which is unlikely to recur—rather than the beginning of a new era in the development of the human species. The “mutants” of the 1960's have been succeeded in the colleges not by more extreme versions of themselves but by yet another new generation, which is once again “hitting the books” that should by now have been molding beneath another inch or two of dust.

Literature and Revolution

The idea that literature has no future, then, need not be taken very seriously. What does need to be taken seriously, however, is the fact that this idea has achieved so widespread an acceptance. For those who predict the death of literature are not announcing a development over which they have no control; they are hoping to bring about what they pretend merely to foresee. Some of those “prophets” would wish to see literature die because books are, in their view, a major instrument of human enslavement. Thus Norman O. Brown:

We are in bondage to authority outside ourselves: most obviously... in bondage to the authority of books.... This bondage to books compels us not to see with our own eyes; compels us to see with the eyes of the dead, with dead eyes.... There is a hex on us, the specters in books, the authority of the past; and to exorcise those ghosts is the great work of magical self-liberation.

But not only do books serve to perpetuate our enslavement to the authority of the past, they also reinforce our subjugation to the tyranny of mind, of reason, of logic, and all this too must be exorcised if the spirit is ever to be free. All the books, says Brown (meaning it, I suspect, more than metaphorically), must be burned: “In the fire of the holy madness even books lose their gravity, and let themselves go up into the flame.”

Norman O. Brown sees books as obstacles to a revolution of the most far-reaching kind—a revolution against the human condition itself—but others would like to see literature die on more narrowly political grounds. “Good writing is counter-revolutionary,” said a radical feminist toward the end of the 1960's, and her sentiments were echoed by a professor of literature who denounced the subject he teaches for blunting our outrage at the *status quo* and for encouraging us to make our peace with things as they are. Of course great works of literature—the novels of

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Dickens, for example—have often had the opposite effect; they have provoked the outrage of their readers and stimulated a demand for social or political reform (just as, despite Norman O. Brown, books have often *helped* people to see with their own eyes). Nevertheless there is no denying that literature—and in fact art in general and especially the greatest art—is most often anti-political in its influence, a dampener of activist ardors, a chastener of utopian greeds.

T.S. Eliot once put the matter with his characteristic sharpness: "In criticism you are responsible only for what you want, [but] in creation you are responsible for what you can do with material which you must simply accept." This "material" which the artist "must simply accept," and which he teaches us to accept—to accept and not to struggle against—is life as the artist knows it in his own time and place. But the material in question, says Eliot, includes "the emotions and feelings of the writer himself," which are also "simply material which he must accept—not virtues to be enlarged or vices to be diminished." (No wonder then that radicals, who seek as earnestly to transform themselves as to transform society, have generally been hostile to literature.)

Bored by Books

It is, in short, because we have been living in an age of radical activism that predictions of the death of literature have been so widely propagated and so readily accepted. So far as the future is concerned, we can be sure that whenever the activist temper flares up again, literature will be held in suspicion and disesteem. But for many people the idea that literature is finished has also seemed plausible for reasons having more to do with the history of politics. To put the point as plainly as possible, such people find themselves bored by almost everything that passes for literature today. Of course some people have always been bored by literature, and boredom in any event usually says more about the person bored than about the thing he is bored by.

But it is another matter when *literary* people find themselves bored by literature, when people who have devoted their lives to studying and teaching and even writing literature, people for whom literature had always been a passion and even a lust, can hardly bring themselves to read a new novel, let alone a new volume of verse. The poets read, or at least review, each other, but does anyone else read new poetry anymore? As for fiction, which has been the dominant literary mode in our culture for about a century now, it still has a relatively large audience, but it too has begun to bore many who were once in love with it. Nearly 20 years ago, Leslie Fiedler, a famous and brilliant critic, opened an article in a leading literary magazine with the admission that the sight of a group of new novels aroused in him "a desperate desire to sneak out to a movie. How respectable the form has become, how predictable!"

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In its day this was a shocking statement, an offense to the regnant pieties of the literary world, but by now such sentiments have themselves become respectable and predictable. Susan Sontag, another famous critic, also admitted to being bored by the new novels she was reading, but, unwilling out of some atavistic loyalty to pronounce literature dead on that account, she developed an ingenious theory according to which boredom became a new form of interested response. And then there was Richard Poirier, a teacher of literature, an editor, and a much-published critic who could say of a recent modernist novel which he himself had praised as a work of genius that "if I hadn't promised to review it I might not have finished it at all."

What precisely was it that had gone wrong? What had become boring about literature? For Poirier, who bravely admitted to boredom with many established classics of the past, nothing essential had changed; but in the case of critics like Fiedler and Sontag, whose main interest has been the modernist movement, with its emphasis on formal experimentation, the problem was that "the tradition of the new," as Harold Rosenberg called it, had worn itself out—becoming, so to speak, more traditional than new. And indeed nothing seems more quaintly old-fashioned today, more rearguard, than the self-styled avant-garde. When Pound and Eliot and Joyce and the other founding fathers of literary modernism undertook to "make it new," the point of their formal experiments was to break through literary conventions grown stale into a new apprehension of reality, and to find a new way of bringing order to the special chaos of modern life. But for a long time now, the literary conventions standing in the way of a fresh and newly ordered perception of the world have been those of the modernist movement itself, which have become as stylized and academic—and boring—as the conventions against which it once declared a war of independence.

The Exhaustion of the Avant-Garde

Modernism meant formal experimentation, but it also meant a certain attitude toward the modern world. Whether (like Pound and Eliot) their politics were of the Right, or whether (like Aragon and the early Dos Passos) their politics were of the Left, all the writers of the modernist movement were united in their hostility toward "bourgeois society" and what we call today its "middle-class values." They were, in a word, "alienated," and out of the torments of this sense of estrangement—for most of them a new and unsettling experience—they were often able to wrest a detached perspective on a world from which they felt, and very often actually were, excluded. As the decades went on, however, the anti-bourgeois attitudes associated with modernism increasingly became the commonplace pieties of the literary world (and by the mid-1960's, of the educated middle class as a whole), growing

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in the process as respectable and predictable as the literary conventions through which they were endlessly and tiresomely repeated. There were moments when it seemed impossible to find a new novel which did not celebrate the superiority of its author to the world from which he had miraculously sprung, and whose only point in describing that world was to expose it as even shallower and less interesting than he could confidently expect his audience already to think it was. This may have been good for radical politics, but it was bad for modernist writing.

Nor has the exhaustion of modernism been accompanied in literature by a revitalization of realism. Around the same time that Leslie Fiedler was complaining about the decline of the avant-garde in fiction, Lionel Trilling was registering another kind of complaint having to do, not with matters of form, but with questions of substance. Literature, said Trilling, had "voluntarily surrendered" what had previously been one of its "most characteristic functions, the investigation and criticism of morals and manners." I myself subsequently lamented the degree to which the novel had given up its old effort to bring us "news" of worlds with which we were unfamiliar; and more recently Tom Wolfe offered a similar but even more aggressive indictment: "By the 1960's, about the time I came to New York, the... novelists had abandoned the richest terrain of the novel: namely, society, the social tableau, manners and morals, the whole business of 'the way we live now,' in Trollope's phrase."

Alternatives to the Novel

What all of us were lamenting was the demise of the realistic novel, and each of us had a candidate to propose as its successor in the enterprise of investigating and criticizing manners and morals and of bringing news of the way we live now. Trilling, much impressed with David Riesman's *The Lonely Crowd*, nominated sociology. I myself, and others, thought that magazine articles and reportage, "of all things," were taking over what the novel had "voluntarily surrendered." And Wolfe, thinking of himself and other writers who applied novelistic techniques to their reportage, put the New Journalism forward as the legitimate heir of the great traditions of realistic fiction.

All of us, I now think, were right in our complaint about fiction and wrong in our choice of alternatives. Trilling was wrong about sociology: instead of telling us more and more about the way we live now, the sociologists have been telling us less and less, and much of what they have been telling us we already know. I was wrong about magazine articles: instead of developing in the direction of a deeper and more extensive investigation of the manners and morals of our time, magazines have increasingly engaged in political agitation and moralistic exhortation, with articles degenerating into veiled sermons and editorials. And Wolfe was wrong about journalism: instead of serving in the spirit

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of Balzac as “secretaries” of American society, the New Journalists (ironically, but perhaps not so surprisingly, following the example of the novelists before them) have become increasingly narcissistic, with every subject or assignment presenting another occasion for the display of their personalities and for the assertion of their superiority to the rest of the world.

The past 50 years, then, have seen the displacement of realism by modernism, the exhaustion in its own turn of the modernist impulse, and a somewhat desperate search for a new form in which the old ambition of literature to record “the way we live now,” to set it all down in rich and precise detail, to see the world as in itself it really is, can be renewed and reinvigorated.

In the light of this experience, what can we expect the next 50 years to bring? There is obviously no way of knowing for sure, but my own guess is that imaginative literature will once again offer itself as the means by which the perennially insistent hunger for showing us how we live and what we are like can best be satisfied. I think this will happen because the logic of literary history points toward it. There is no other way for literature to go, except perhaps to the grave, and I do not believe that literature will go to its grave, not only because the case for believing that literature has no future is so weak, but also—and mainly—because it is impossible to imagine a world in which words will cease to delight and stories will cease to be told.



SOME PRINCIPLES OF DEVELOPMENT

By Neil Jacoby

A noted economist questions some of the "conventional wisdom" about development. Neil H. Jacoby is professor of business economics (and former dean) at the Graduate School of Business Administration, University of California at Los Angeles. He was a member of President Eisenhower's Council of Economic Advisors, and has served as U.S. representative in the Economic and Social Council of the United Nations. He participated in developmental aid missions to India, Laos, Thailand and Cambodia. Professor Jacoby has written several books, among them, *Multinational Oil: A Study in Industrial Dynamics* and *The Progress of Peoples: Toward a Theory and Policy of Development with External Aid*. In his article, based on a talk delivered at the *Pacem in Terris* Convocation in Washington, D.C., sponsored by The Center for the Study of Democratic Institutions, Professor Jacoby comments on an article by Kenneth Thompson published in the previous issue of *Dialogue*, Vol. 7, No. 3.



Nearly three decades of postwar experience with the problem of development have served to undermine many cherished theories and to explode many myths. The rapid success of Marshall Plan aid in restoring the advanced industrial economies of war-torn Europe misled Americans into believing that massive injections of concessional assistance into traditional societies would generate equally rapid development. Now, we see the development process as a much more time-consuming and complex phenomenon than we had thought. We have become skeptical of the value of mechanistic approaches, such as the simplistic use of savings-to-income and capital-to-output ratios in econometric models. We are impressed by the infinite variety of developmental paths, by the inexplicable fits and starts in economic growth. We are puzzled by the occasional rocketing "take-offs" of some countries after long periods of apparent stagnation, and by the persistent failure of other countries to make headway notwithstanding massive infusions of external aid.

We have much to learn about development, and will be wise to maintain an attitude of humility. Yet a few guiding principles can be distilled out of our experiences, that appear to retain their validity over time and in nearly all circumstances. Kenneth Thompson's description of the spectacular success of the Rockefeller Foundation's technical assistance to agriculture in fomenting the "Green Revolution" exemplifies the principle that technical assistance is the highest-yielding form of external aid. Dollar for dollar, it produces more than commodity gifts, capital project aid, "soft" loans for infrastructure, or other types of concessional assistance.

Six Guiding Principles

I suggest that six guiding principles should shape the external aid policies of the United States in the future. I refer, of course, to economic development assistance—and not to disaster relief—to which different principles apply.

First, development is seriously impeded by excessive population growth. Kenneth Thompson has noted that "population growth rates continue at unprecedented rates and make imperative the spread of new agricultural technologies, if food production is to keep pace." Do they not make even more imperative the spread of contraceptive technologies? Surveys indicate that, in less developed lands, most parents prefer to have fewer children than they propagate. Present large families increase consumption, reduce savings, and place a heavy drag on development. The per capita real incomes of peoples in the less developed countries would have risen at a higher rate than in the developed countries during the 1960's, if their population growth rates had been equal.

Second, laying the human foundations of development takes more time than erecting the physical superstructure. Creating literacy and numeracy and manual skills among the people of a traditional society usually requires decades. The construction of social infrastructure—such as schools and hospitals—and industrial and commercial facilities can be accomplished in years. This is why countries passing through the phase of basic education, skill training and attitude formation often appear to be stagnating, because such inputs are not reflected in gains in the gross national product (GNP). Instead, they are forming human capital, which can produce striking gain in their GNPs later on.

Third, self-help measures by the developing country are more basic than external aid. "Self-help" means all of these actions that the people and the government of a less developed country can take, *on their own initiative*, to foster values, attitudes, habits, regulations and laws favorable to productive work, saving, and investment, and to the creation of economizing institutions and policies. Without self-help, no amount of external aid will bring about development; and foreign aid may even be counterproductive if it enables a country to postpone those essential

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but difficult social changes that threaten vested interests in the *status quo*. With strong self-help, however, external aid can be highly productive, as it was in Taiwan, Thailand, Iran and South Korea. It can hasten by decades the passage of a country from poverty into adequacy of living standards.

Fourth, technical assistance is the most productive form of external aid. Transfers of knowledge, skills, and productive "know-how" from a more to a less developed country can permanently raise the productivity of work, and make land and capital fruitful. Mere transfers of capital, unaccompanied by the pertinent technology, can on the other hand, provide only a temporary lift to output. The ancient Chinese aphorism applies: "Give a man a fish and he eats a meal. Teach him how to fish, and he eats the rest of his life."

Fifth, foreign private investment is more productive of development than government-to-government assistance. The reason is that foreign private investment requires the concurrent transfer of technology and of managerial talent along with capital, whereas this is not necessarily so in the case of foreign government loans or grants. Also, when an investment must pass the business tests of prospective profitability, it is more likely to be productive.

Sixth, development is more important than economic equality. Nobel Laureate economist Simon Kuznets wrote many years ago that "in the early phases of industrialization in the underdeveloped countries income inequalities will tend to widen before the levelling forces become strong enough first to stabilize and then reduce income inequalities." The development process often first involves an entrepreneurial minority before it begins to raise the incomes of the masses of the population. Some see temporarily rising inequality as a serious fault, and they advocate heavily progressive taxation or other measures to forestall it. Unfortunately, this can frustrate the domestic saving, investment and capital formation that is essential to development. It is better to raise the incomes of a minority than to leave all in the *status quo*. An obsession with equality should not be allowed to frustrate development.

The Priority of Social Change

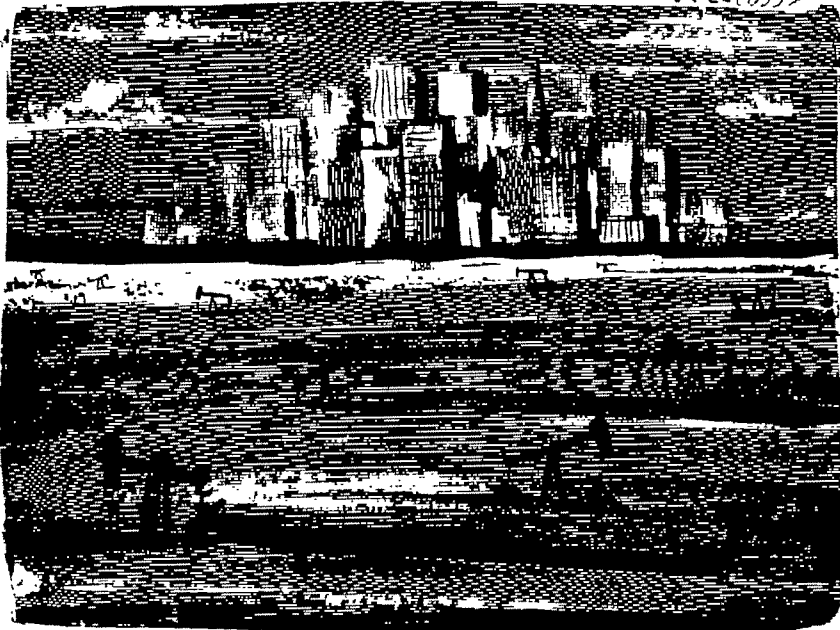
These six guiding principles mean that countries desiring development should place a high priority upon measures to curb excessive population growth, and to foster basic education and skill training among its people. These actions, plus efforts to develop a social and legal framework conducive to modernization, will make investment productive—both domestic investment by its own citizens and external investment on business or concessionary terms. Because technical assistance is the most productive form of external aid, and is necessarily linked to management and capital when an investment is made in a country by a multinational company, the less developed country would be wise to

Some Principles of Development

seek an accommodation with multinational business. Instead of frustrating confrontation between the developing countries and the multinational corporations, the world urgently needs their adherence to an International Code of Investment from which both will benefit.

These guiding principles will be criticized by those who regard development simplistically as a matter of redistributing wealth from the "rich" to the "poor" nations. For them, massive grants without "strings" are the answer. They forget that the essence of development is *social change* in the developing country. Income transfers, unaccompanied by social change, are more likely to deter than to augment real development. Moreover, the peoples of advanced nations today hold high expectations of improving their own lots. They will look closely to see whether their concessional aid to less developed countries is being used productively. They will not support blanket transfers of some percentage of their GNPs, irrespective of its use.

I do not share the current pessimism about development. Rising world prices of energy and raw materials—of which developing countries are major suppliers—are shifting the terms of international trade in their favor. Given a reasonable measure of political stability, the growth rates of the less developed countries should rise during the 1970's well above the five percent annual growth achieved during the 1960's.



WHAT IS A PAINTING?

By Michael Polanyi

An eminent scientist-philosopher suggests that some widely-accepted ways of thinking about art are mistaken. He views the images in a painting (as in drama and poetry) as essentially different from nature because works of art fuse incompatible elements into something entirely new.

Michael Polanyi started his career as a physical chemist, then turned to economics, the social sciences and philosophy. He has taught at universities in England, India and the United States. His books include *The Study of Man*, *Personal Knowledge*, *The Logic of Liberty*, *Beyond Nihilism* and *Science, Faith and Society*. His article originally appeared in *The British Journal of Aesthetics* and was reprinted in *The American Scholar*.



There is a strange painting, covering the vault of the church of Saint Ignazio in Rome. It is the work of the Jesuit Andrea Pozzo, done about the turn of the 17th century. The painting shows, among a number of figures, a set of columns that appear to continue the pilasters supporting the vault. But these subjects of the painting can be seen in their normal shape only if the viewer stands in the center of the aisle. If he moves away from that point even by a few yards, the columns appear to be curved and lying down at an angle to the structure of the church. If you walk around the center of the aisle, the painted columns keep moving around, always lying down away from your position.

At first sight the Pozzo phenomenon may seem to present no problem to speak of. We know that a perspectival painting represents its subject from one central position; hence, when viewed at an angle to this direction, the painting must appear distorted. Pozzo himself gave this as the reason that his painting is distorted when seen at an angle to its perspectival axis.

– But this explanation settles Pozzo's case at the cost of raising a much wider question. For it follows from it that all perspectival paintings must be distorted to a similar degree when viewed at an angle to their perspectival axis. And this does not happen. One can walk past a painting, for example, in a picture gallery, without the painting's

being distorted as Pozzo's painting is. Indeed, the distortion should be much greater there than in the Pozzo case, since the deviations from the line of perspective caused by passing a picture must be greater than those evident when viewing the vault of a church from a few yards away from the center of the aisle.

"A problem of perspective"—Pozzo's painting on the ceiling of Saint Ignazio.



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This problem is, of course, well known in a general way. The fact that perspectival design continues to be seen virtually unchanged from directions at wide angles to its axis has been frequently noted. But the treatment of this problem seems to have been rather cursory, perhaps because no estimates were made of the size of the distortion to be expected.

The Viewer's Perspective

The Pozzo case confronts us with the full measure of this problem. It forces us to look for a powerful factor that protects ordinary paintings from being distorted, and this must be a factor that is absent in the Pozzo painting, thus leaving it defenseless against distortion when viewed at an angle. Mr. M. H. Pirenne has offered an interesting explanation of these facts in a book entitled *Optics, Painting and Photography*, recently published by the Cambridge University Press. Pirenne suggests that the factor that protects ordinary perspectival paintings from distortion by angular vision is mostly based on a flat canvas. Our awareness of the canvas reduces, in Pirenne's view, the depth of a painting's perspectival design and thus protects the painting against the distorting effect of being viewed at an angle. According to this theory, the Pozzo painting is subject to distortion, because its perspective is not counteracted by an awareness of the ground on which it is painted.

But if this is so, we would expect the Pozzo painting to look different from an ordinary painting, even when both are viewed correctly along the axis of their perspectives. They do, in fact, look different, and different in a way that Pirenne's theory predicts. When viewed from its perspectival center, the Pozzo picture is deceptive; its columns appear to be a real continuation of the church's architecture: the picture is seen as fully three-dimensional. Ordinary pictures look different. They are not deceptive, not fully three-dimensional. We do not mistake a still life by Cézanne for real fruits and vegetables placed in a recess of the exhibition's wall.

Brushstrokes on Canvas

But at this juncture, just when all seems neatly settled, new problems arise owing to the modern rejection of the traditional conception of painting. Remember the kind of statements that inaugurated modern painting toward the end of the last century? Whistler described his own paintings as the arrangement of colors and tones on canvas. In France, Maurice Denis declared some years later that a painting is "essentially a plane surface covered with paint in a certain arrangement." The 20th century opened with a series of novel works in Italy and Switzerland, in France, Germany and Russia, all showing paintings that radically rejected any aim of resembling nature. Pirenne's theory affirming that we are invariably aware of the canvas might appear to side with

this modern movement, which would identify all painting with brushstrokes on a canvas.

But this is not so. PiRENNE speaks of our *subsidiary* awareness of the canvas and does so with reference to my writings, in which I sharply distinguish between subsidiary awareness and focal awareness of an object. This distinction—the distinction between a subsidiary and a focal awareness—changes the situation.

I shall demonstrate this by recalling Sir Kenneth Clark's experiment, made about twelve years ago, in viewing *Las Meninas* (The Ladies in Waiting) by Velazquez. Owing to its rough structure, *Las Meninas* must be viewed from a distance. Clark wanted to observe how, by approaching it from a distance to a closer point, one sees the painting dissolving into fragments. He hoped to see a gradual transition—but there was none. He wrote:

I would start from as far away as I could, when the illusion was complete, and come gradually nearer, until suddenly, what had been a hand, and a ribbon, and a piece of velvet dissolved into a fricassee of beautiful brushstrokes.

Now if we are asked two questions: 1) which view showed a canvas plus brushstrokes? and 2) which view showed the painting? the answer would be that the view at close quarters showed a canvas plus brushstrokes and the view from a distance showed the painting. We can see only *one or the other* of these two sights, never the two at the same time.

Parts vs the Whole

But the situation changes if we admit two different ways of seeing an object. Gestalt psychology has long since observed that to look at the several parts of a whole can destroy our view of the whole. Let me recall a case of this kind that resembles the experiences of Sir Kenneth Clark. When flying first started, pilots discovered the traces of ancient sites over which people had walked for centuries without noticing them. Back on the ground, the flyers themselves lost track of the ancient sites.

It would be nonsense to say that when, by moving away some distance, we come to see a collection of parts as one whole, we no longer see the parts. What happens is that we see the parts now in a new way, namely, *as parts of a whole*. To introduce my own terms, let me say that to look at the parts separately is to see them focally, while to see them together forming a whole is to be aware of them subsidiarily. And this subsidiary awareness distinguishes the normal painting both from a focal awareness of the canvas plus brushstrokes, in which the painting falls apart, and from a total unawareness of the canvas, which produces a deceptive painting like the Pozzo ceiling.

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A normal painting thus includes both the perspectival depth of its paint and the flatness of its canvas, these two contradictories being seen as one joint quality. And it is this quality of depth-*cum*-flatness that keeps a normal painting from being deceptive and secures it against distortion when viewed from the side.

The Fusion of Incompatibles

These observations broadly answer the question, What is a painting? But a closer look reveals an incongruity. We have seen that a painting's fragments, into which it is decomposed when seen at close quarters, are united into a coherent image when the viewer recedes to a distance, and I have compared this with the way an ancient site is discovered by rising above it in an airplane. I said that gestalt psychology accounts for this transformation when parts are united to form a whole. Rudolf Arnheim has developed this relationship in his *Art and Visual Perception* (1954) by explaining the coherence of a painting in terms of gestalt psychology. But there is something peculiar—not mentioned by Arnheim—in the way gestalt formation takes place when forming a painting. This union is not a fusion of *complementary parts* to a whole, but a fusion of *contradictory features*. The flatness of a canvas is combined with a perspectival depth, which is the very opposite of flatness.

Such integration of incompatibles is not unknown to psychology. Binocular vision is based on the fusion of incompatibles. This action works even more strikingly in the use of stereoscopic photography. Stereoscopic pictures are taken about four inches apart. At a glance they look much the same, but actually they differ at every point. When we view them jointly, using one eye for each, they are fused into a single image, uniting their incompatible features into one strikingly novel sight. A deep three-dimensional appearance is produced by fusing two conflicting flatnesses.

This fusion produces a radical extension of our eyesight, but the integration of canvas with perspectival design goes much further in its radical innovation. Binocular integration adds wonderfully to our powers of perceiving what is there, but the integration of incompatibles in a painting reveals to us something beyond all that exists in nature or human affairs: for what we see is a flat surface having a deep perspective. This quality of flat depth, which is the hallmark of a normal painting, may be said to be transnatural.

It has been frequently noticed that the colors and tones available to the painter cannot equal the variety we meet in nature; but to possess a flat depth goes far beyond nature. We are facing here no mere deficiency of a painting, which reduces its imitation of nature, but its possession of a peculiar quality that is altogether lacking in nature. And thus we realize that the painter must aim from the very start at producing an image *essentially different from nature*.

What Is a Painting?

This capacity to fuse incompatible features of an artifact into radically novel qualities has been expanded by modern painting. I have mentioned before the view, repeatedly expressed since the end of the last century, that painting was essentially a canvas with brushstrokes arranged on it. This view was mistaken but it did express the urge of the time for going always to rock bottom. In painting this was done by reducing simulation and increasing thereby the part played by flatness. Cubism and expressionism, for example, went a long way toward flatness by reducing simulation, and abstractionism achieved total flatness by foregoing all representation. My theory of the integration of incompatibles admits of all such variations, which have opened the way to modern art throughout its various branches.

Illusion in Drama and Poetry

But before developing further these ideas of the transnatural, let me enlarge the basis of my argument by including other kinds of representative art. We shall see that evidence from poetry and drama will support my conception of painting. Take drama first. The actor on the stage resembles the painter in trying to simulate something, while this simulation is kept firmly short of deception. In playing Hamlet, the actor must simulate killing Polonius and being killed by Laertes, but if any of these actions were to give the impression that someone had been actually killed on the stage, this would disrupt the play.

The actor's simulation is kept from turning into a deception by an opposing force that is intrinsic to his art. Opposition to simulation, which in the case of a painting consists in its flatness, is found in a play in the apparatus of stagecraft. The playwright, the director, the designers and the actors producing a play jointly restrain the range of simulation. A painting's self-contradictory flat depth has its counterpart here in equally paradoxical stage murders and other such stage scenes. Art appears to consist, for painting as for drama, in representing a subject within an artificial framework that contradicts its representative aspects, and I think we find the same structure in all representative arts.

This view of representative art was anticipated by I. A. Richards with respect to poetry. In *Principles of Literary Criticism* (1924), he wrote this of the meter in poetry:

Through its very appearance of artificiality, meter produces in the highest degree the "frame" effect, isolating the poetic experience from the accidents and irrelevancies of everyday experience.

But meter is only one artificiality of a poem among many others. Rhyme, expressive sounds and distinctive grammatical construction, strange connotation of words and, above all, metaphor are other fixtures of the poetic frame. They all function as subsidiaries, which, together

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with such content of the poem as can be put into prose, form the meaning of the poem. Take Shakespeare's Sonnet XVIII ("Shall I compare thee to a summer's day?"). This poem of supreme power says little more in prose than: "You are beautiful, but you will fade and die except that you will be remembered in my immortal verse." The power and beauty of the poem lies in a subsidiary framework embracing a simple idea.

The Function of Art

We can then define representative art as comprising images, actions or statements within an incompatible artificial framework. Paintings representing objects are thus placed firmly in the same class as plays representing action and poems making statements. They all are works of art, which, by the fusion of their content with an incompatible frame, have a quality wholly detached both from nature and from man's personal affairs.

There seems then nothing tangible left that a work of art could tell us. And this is not far from the truth. The factual information content of art is slight, its main purpose being to evoke our participation in its utterance. And again, it is for poetry that this action of the arts has been first identified. I. A. Richards has contrasted the vagueness and incoherence of our own experiences with the severely circumscribed statements of a poem. And T. S. Eliot spoke likewise of the ordering powers of poetry:

...the ordinary man's experience is chaotic, irregular, fragmentary. The latter falls in love, or reads Spinoza, and these two experiences have nothing to do with each other, or with the noise of the typewriter or the smell of cooking; in the mind of the poet these experiences are already forming new wholes.

From our lives ever meandering, and from things we pass by, poems and plays and paintings call up vague memories and cast them into structures firmly woven and well organized. And as the artist draws on his own rambling experience for subjects to be shaped by his art, so do we, his public, turn to his works in order that their aspect may make sense of our own fugitive experiences.

By means of its artificial framework, which is sharply incompatible with its subject, a work of art takes us into an experience beyond the realm both of nature and of practical affairs, and our understanding and acceptance of art consists in letting it thus carry us into its own transnatural domain. Art does not inform us about its subject, but makes us live in it, as its maker first lived in it—sometimes many centuries before.

This kind of participation, however, does not explain the passion, the breathtaking effect that a poem, a play or a painting can evoke. Some responses occurring in other domains may suggest an explanation.

Closest would be the comparison with music, but this would lead us away from the representative arts to the abstract kinds of art, which are off my subject. Let us take rather the triumph of scientific discovery. Announcing his discovery that the square of planetary orbital periods was proportional to the cube of the corresponding solar distances, Johannes Kepler wrote in 1619:

So now, since eighteen months ago the dawn, three months ago the proper light of day, and indeed a very few days ago the most marvelous contemplation has shone forth—nothing holds me; I will indulge my sacred fury....

This passion resembles that evoked by a great work of art, but there is a difference: the emotions of discovery are not transmitted to the student; the latter learns of the proportionality of cubes and squares in the planetary system without being deeply moved by these matters.

Existential Feelings

The difference seems due to the fact that the feelings evoked by a work of art even in its viewer are existential rather than intellectual. Kepler himself did undergo a triumphant transformation when his discovery changed the image of the universe, but this experience had to remain mainly his own. Perhaps it is in popular emotions that we might find an analogy to the way one is carried away by a work of art.

Look how a patriotic citizen of a country—or even one who merely feels at home in it—can be moved by the unfurling of the nation's flag. All the incoherent and unspecifiable experiences that make up a person's national memories are mobilized by the sight of a national flag unfurled to its salute by a large crowd. Thus, a closely circumscribed structure, the simple pattern of the flag, can draw from a man's diffuse life space an intensely concentrated emotion. Replace the flag by a work of representative art, and you see the same mechanism at work. From diffuse experiences of life the clear utterances of art draw a passionate response. Art does this first in the mind of its maker and then in the mind of its public.

One might think that to convey a matter drawn from experience is to transmit a factual communication; but this is not so. Once an experience of ours is transfused into an incompatible artifact—be it in a poem, in a play or in a painting—our experience is turned into a matter unprecedented in nature or the affairs of men. And, when such trans-natural matters are evoked in us by art, this event tells us nothing that can be true or false; it does not convey a factual communication.

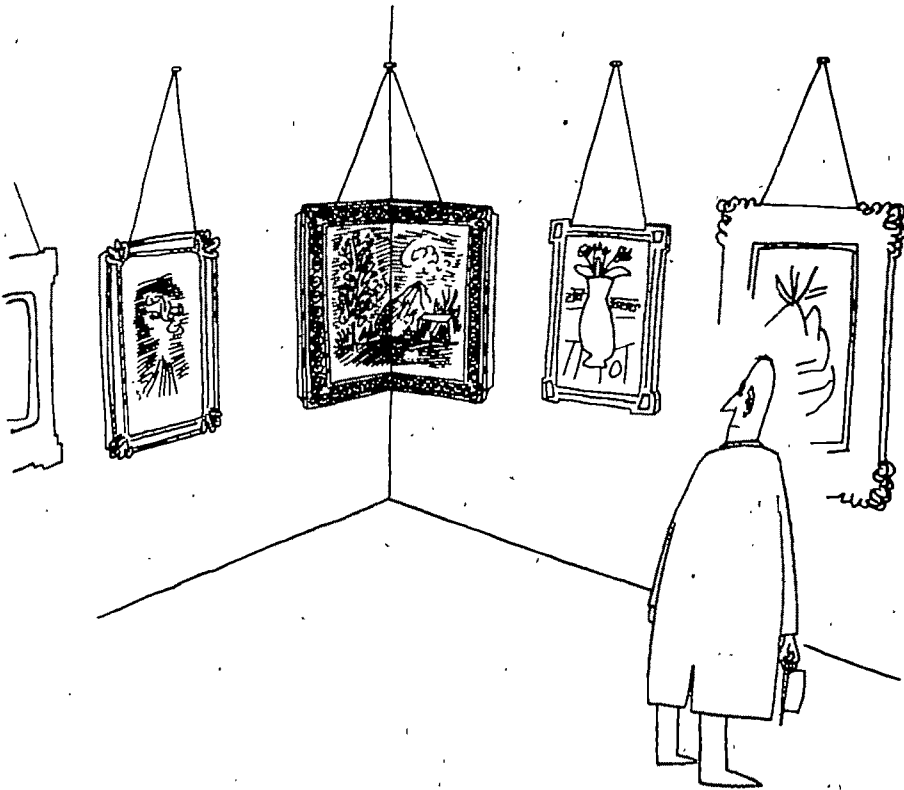
This does not mean that the effect of representative art lies altogether outside our relation to nature or to human affairs. Works of art may imply certain facts, and these may appear convincing or misleading. Art may even deliberately express ideas, and these may be true or false.

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But the truth of such ideas does not qualify them as a true work of art, any more than their possible falsity—although it may be objectionable—would disqualify their utterance as a work of art.

Transcending Experience

All this may be fairly obvious in respect to poetry and drama, but not quite so obvious for painting. So let me make it clear once more that it does apply also to painting, even in all its traditional forms, which aimed at simulation. The normal painting of all times belongs to the same class as poetry and drama, for it possesses an artificial frame that contradicts its subject and yet is so closely fused with this subject that union of the two acquires a quality of its own, a quality unexampled in nature and the affairs of men. In this artificial estrangement of its subject lies the power of all painting to represent matters drawn from experience in terms that transcend all natural experience. And therein lies equally the power of all representative art.



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HOMAGE TO DUKE ELLINGTON

By Ralph Ellison

This tribute to one of the great composers and performers of the 20th century was written for Duke Ellington's 70th birthday in 1969. Ellington died five years later, shortly after his 75th birthday. But few things written about him catch as well the personal flavor and charismatic impact of the composer's stylish elegance, which served young blacks as a model of disdainful dignity in the face of racial discrimination.

Ralph Ellison is the author of *The Invisible Man*, which won the National Book Award for fiction in 1952 and was chosen in a recent poll of critics as the outstanding American novel since World War Two. He has taught literature and American Negro culture at various universities. Before he settled on a literary career, Mr. Ellison studied composition at Tuskegee Institute and played the trumpet. A group of his essays—autobiographical, literary, and musical—are collected in *Shadow and Act*. His article was originally published in the Washington *Sunday Star*.



It is to marvel: the ageless and irrepressible Duke Ellington is 70 and the President of the United States has ordered in his honor a state dinner to be served in the White House where Duke's father, then a butler, once instructed white guests from the provinces in the gentle art and manners proper to such places of elegance and power. It is good news in these times of general social upheaval that traces of the old American success story remain valid, for now where the parent labored the son is to be honored for his achievements. And perhaps it is inevitable that Duke Ellington should be shown the highest hospitality of the Nation's First Family in its greatest house, and that through the courtesy of the chief of state all Americans may pay, symbolically, their respects to our greatest composer.

He is far from being a stranger to the White House, for during the occupancy of President and Mrs. Lyndon B. Johnson, Ellington became something of a regular guest there, and indeed, it was President Johnson who appointed him to the National Council on the Arts, thereby giving recognition to our most important indigenous art form in the person of its most outstanding creator. Certainly there is no better indication that those on the highest levels of governmental power have at last begun to recognize our arts and their creators as national treasures.

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Perhaps in Ellington's special case this is a proper and most fitting path to official national recognition, since for more than 40 years his music has been not only superb entertainment but an important function of national morale. During the Depression whenever his theme song "East St. Louis Toodle-oo" came on the air our morale was lifted by something inescapably hopeful in the sound. Its style was so triumphant and the moody melody so successful in capturing the times yet so expressive of the faith which would see us through them. And when the "Black and Tan Fantasy" was played we were reminded not only of how fleeting all human life must be, but with its blues-based tension between content and manner, it warned us to look not only at the darker side of life but also to remember the enduring necessity for humor, technical mastery and creative excellence. It was immensely danceable and listenable music, and ever so evocative of other troubled times and other triumphs over disaster.

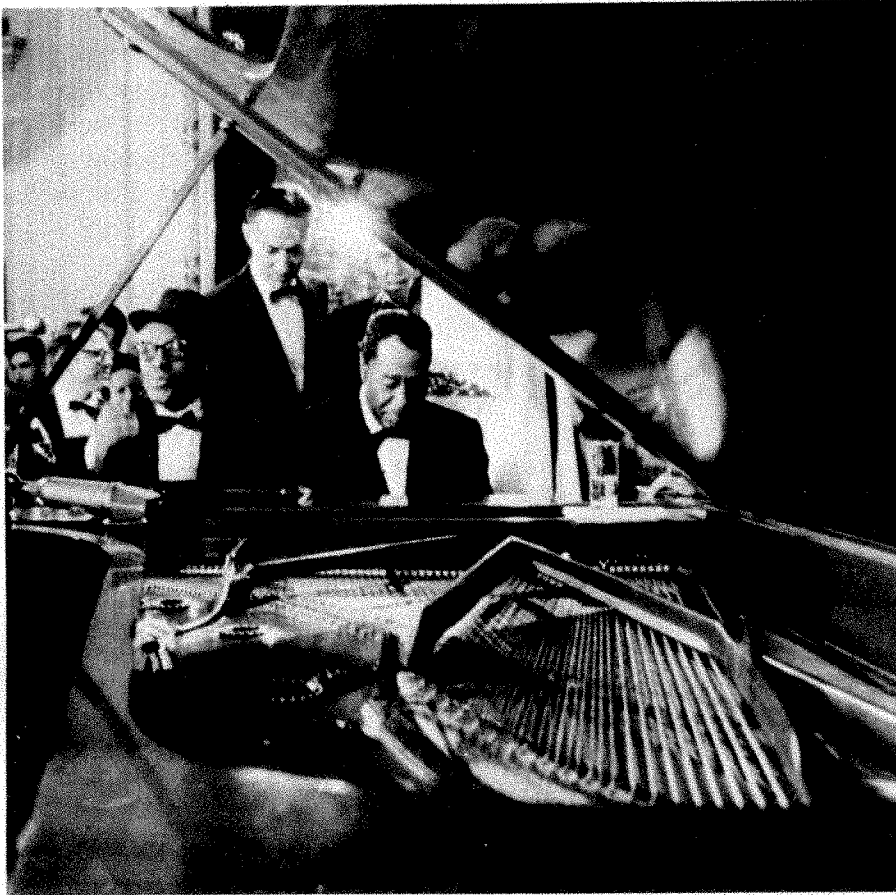
And how many generations of Americans, white and black, wooed their wives and had the ceremonial moments of their high school and college days memorialized by Ellington's tunes? And to how many thousands has he brought definitions of what it should mean to be young and alive and American? Yes, and to how many has he given a sense of personal elegance and personal style? A sense of possibility? And who seeing and hearing Ellington and his marvelous band hasn't been moved to wonder at the mysterious, unanalyzed character of the Negro-American—and at the white American's inescapable Negro-ness?

Stylized Elegance

Even though few recognized it, such artists as Ellington and Louis Armstrong were the stewards of our vaunted American optimism and guardians against the creeping irrationality which ever plagues our form of society. They created great entertainment but for them (ironically) and for us (unconsciously) their music was a rejection of that chaos and license which characterized the so-called jazz age associated with F. Scott Fitzgerald, and which has returned once more to haunt the nation. Place Ellington with Hemingway, they are both larger than life, both masters of that which is most enduring in the human enterprise: the power of man to define himself against the ravages of time through artistic style.

I remember Ellington from my high school days in Oklahoma City, first as a strangely familiar timbre of orchestral sounds issuing from phonograph records and radio. Familiar, because beneath the stylized jungle sounds (the like of which no African jungle had ever heard) there sounded the blues, and strange because the mutes, toilet plungers and derby hats with which I was familiar as a musician had been given a stylized elegance and extension of effect unheard of even in the music of Louis Armstrong. It was as though Ellington had taken the tradi-

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Duke Ellington at the piano during the White House celebration of his 70th birthday. Joining him at the keyboard (with hat and glasses) is veteran jazz pianist Willie ("The Lion") Smith.

tional instruments of Negro American music and modified them, extended their range, enriched their tonal possibilities. We were studying the classics then, working at harmony and the forms of symphonic music. And while we affirmed the voice of jazz and the blues before all criticism from our teachers because they spoke to a large extent of what we felt of the life we lived most intimately, it was not until the discovery of Ellington that we had any hint that jazz possessed possibilities of a range of expressiveness comparable to that of classical European music.

And then Ellington and the great orchestra came to town; came with their uniforms, their sophistication, their skills; their golden horns; their flights of controlled and disciplined fantasy; came with their art, their special sound; came with Ivy Anderson and Ethel Waters singing and dazzling the eye with their high-brown beauty and with the richness and bright feminine flair of their costumes, their promising manners. They were news from the great wide world, an example and a goal; and I wish that all those who write so knowledgeably of Negro boys having no masculine figures with whom to identify would consider the long

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national and international career of Ellington and his band, the thousands of one-night stands played in the black communities of this nation. Where in the white community, in *any* white community, could one have found images, examples such as these? Who were so worldly, who so elegant, who so mockingly creative? Who so skilled at their given trade and who treated the social limitations placed in their paths with greater disdain?

A Culture Hero

Friends of mine were already collecting Ellington records and the more mature jazzmen were studying, without benefit of formal institutions of learning, his enigmatic style. Indeed, during the 1930's and '40's when most aspiring writers of fiction were learning from the style and example of Hemingway, many jazz composers, orchestrators and arrangers were following the example of Ellington, attempting to make something new and uniquely their own out of the traditional elements of the blues and jazz. For us Duke was a culture hero, a musical magician who worked his powers through his mastery of form, nuance and style, a charismatic figure whose personality influenced even those who had no immediate concern with the art of jazz.

My mother, an Afro-American Methodist Episcopalian who shouted in church, but who allowed me nevertheless to leave sunrise Christmas services to attend breakfast dances, once expressed the hope that when I'd completed my musical studies I'd have a band like Ellington's. I was pleased and puzzled at the time, but now I suspect that she recognized a certain religious element in Ellington's music—an element which has now blossomed forth in compositions of his own form of liturgical music. Either that or she accepted the sound of dedication wherever she heard it and thus was willing to see Duke as an example of the mysterious way in which God showed his face in music.

Meeting the Duke

I didn't meet Ellington at the time. I was but a young boy in the crowd which stood entranced around the bandstand at Slaughter's Hall. But a few years later when I was a student in the music department at Tuskegee Institute in Alabama, I shook his hand, talked briefly with him of my studies and of my dreams. He was kind and generous even though harassed (there had been some trouble in travel and the band had arrived hours late with the instruments misplaced and the musicians evil as only tired, black, Northern-based musicians could be in the absurdly segregated South of the 1930's) and those of us who talked with him were renewed in our determination to make our names in music.

A few years later, a stranger in Harlem, I spent many a homesick afternoon playing Duke's records on the jukebox in Small's Paradise Bar, asking myself why I was in New York, and finding reassurance in

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the music that although the way seemed cloudy (I had little money and would soon find it necessary to sleep in the park below City College) I should remain there and take my chances.

Later, I met the writer Langston Hughes who took me up to Harlem's elegant Sugar Hill to visit the Duke in his apartment. Much to my delight the great musician remembered me, was still apologetic because of the lateness of the band's arrival at Tuskegee, and asked me what he could do to aid the music department. I suggested that we were sadly deficient in our library of classical scores and recordings and he offered to make the school a gift of as extensive a library of recordings as was needed. It was an offer which I passed on to Tuskegee with great enthusiasm, but which, for some reason, perhaps because it had not come directly from Ellington himself or perhaps because several people in the department regarded jazz as an inferior form of music, was rejected.

That his was a genuine gesture, I had no doubt, for at the time I was to see a further example of his generosity when Jimmie Lunceford's orchestra, then considered an Ellington rival, came on the radio. The other musicians present kidded Ellington about the challenge of Lunceford's group, to which he responded by listening intently until the number was finished and then commenting: "Those boys are interesting. They are trying, they are really trying," without a trace of condescension but with that enigmatic Ellington smile. The brief comment and the smile were enough, the kidding stopped, for we had all been listening—and not for the first time—and we knew that Duke had little to fear from the challenge of Lunceford or anyone else.

Somewhere during his childhood a friend had nicknamed Edward Kennedy Ellington "Duke" and he had proceeded to create for himself a kingdom of sound and rhythm that had remained impregnable to the fluctuations of fad and novelty, even the passing on of key members of his band.

Jazz styles have come and gone and other composer-conductors have been given the title "King of Jazz" and Duke knew the reason why, as did the world—just as he knew the value of his own creation. But he



"Who were so worldly, who so elegant, who so mockingly creative?"

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never complained, he simply smiled and made music. Now the other kings have departed while his work endures.

When the Pulitzer prize committee refused to give him a special award for music (a decision which led certain members of that committee to resign), Ellington remarked: "Fate is being kind to me. Fate doesn't want me to be too famous too young," a quip as mocking of our double standards, hypocrisies and pretensions as the dancing of those slaves who, looking through the windows of plantation manor house from the yard, imitated the steps so gravely performed by the masters within and then added to them their own special flair, burlesquing the white folks and then going on to force the steps into a choreography uniquely their own. The whites, looking out at the activity in the yard, thought that they were being flattered by imitation and were amused by the incongruity of tattered blacks dancing courtly steps, while missing completely the fact that before their eyes a European cultural form was becoming Americanized, undergoing a metamorphosis through the mocking activity of a people partially sprung from Africa. So, blissfully unaware, the whites laughed while the blacks danced out their mocking reply.

At Odds with European Music

In a country which began demanding the projection of its own unique experience in literature as early as the 1820's, it was ironic that American composers were expected to master the traditions, conventions and subtleties of European music and to force their own American musical sense of life into the forms created by Europe's greatest composers. Thus the history of American classical music has been marked by a struggle to fit American experience into European forms.

In other words, our most highly regarded musical standards remained those of the Europe from which the majority of Americans derived. Fortunately, however, not all Americans spring from Europe (or not only from Europe) and while these standards obtained, Negro American composers were not really held to them because it seemed obvious that blacks had nothing to do with Europe—even though during slavery Negroes had made up comic verses about a dance to which

Miss Rose come in her mistress's clothes
But how she got them nobody knows
And long before the ball did meet
She was dancing Taglioni at the corner
of the street...

Taglioni, being a dancer who was the rage of Europe during the 1850's.

Be that as it may, the dominance of European standards did work a hardship on the Negro American composer because it meant that no matter how inventive he might become his music would not be con-

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sidered important—or even American (1) because of his race and (2) because of the form, if he were a jazzman, in which he worked. Therefore, such a composer as Ellington was at odds with European music and its American representatives, just as he was at odds with the racial attitudes of the majority of the American population and while primarily a creative composer, he was seen mainly in his role as entertainer. Doubtless this explains the withholding from Ellington of the nation's highest honors.

His Manner on Stage

It isn't a matter of being protected as he suggests from being too famous too young—he is one of the world's most famous composers and recognized by the likes of Stravinsky, Stokowski and Milhaud as one of the greatest moderns—but the fact that his creations are far too *American*. Then there is also the fact of Ellington's aura of mockery. Mockery speaks through his work and through his bearing. He is one of the most handsome of men and to many his stage manners are so suave and gracious as to appear a put-on—which quite often they are. And his manner like his work serves to remind us of the inadequacies of our myths, our legends, our conduct and our standards. However, Ellington's is a creative mockery in that it rises above itself to offer us something better, more creative and hopeful than we've attained while seeking other standards.

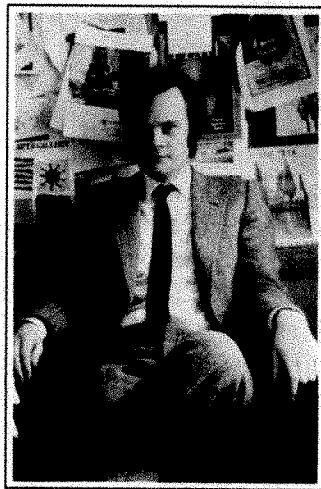
During a period when groups of young English entertainers who based their creations upon the Negro American musical tradition have effected a questionable revolution of manners among American youths, perhaps it is time we paid our respects to a man who has spent his life reducing the violence and chaos of American life to artistic order. I have no idea where we shall all be 100 years from now, but if there is a classical music in which the American experience has finally discovered the voice of its own complexity, it will owe much of its direction to the achievements of Edward Kennedy Ellington. He has been telling us how marvelous, mad, violent, hopeful, nostalgic and (perhaps) decent we are for many years. He is one of the musical fathers of our country and throughout all these years he has, as he tells us so mockingly, loved us madly. We are privileged to have lived during his time and to have known so great a man, so great a musician.

THE ELLINGTON SOUND

By Geoffrey James

Duke Ellington's compositions, played by the remarkable instrumentalists who made up his orchestra, produced a new kind of jazz sound that was "variously pungent, sly, rhapsodic, majestic and fierce." Mr. James traces the 50-year musical career which ended with Ellington's death in 1974.

Geoffrey James reports on jazz and other arts for *Time* magazine. "At 14," he writes, "I was struck dumb when I first heard Louis Armstrong. I straightaway took up the trumpet, spent my adolescence and most of my time at Oxford playing jazz, and ended up with the kind of degree that left me no choice but to become a journalist."



There is a fabled quality, a surface glossiness, about the life of Edward Kennedy Ellington that calls to mind Ira Gershwin's lyrics to Vernon Duke's "I Can't Get Started." Duke Ellington may not, as the song goes, have "sold short in 1929," but around that time he was writing such wonderful blue-chip tunes as "Mood Indigo" and "Rockin' In Rhythm." And perhaps Garbo did not "invite [him] to tea," but he never lacked for renowned company. One thinks of him at a party in London in 1933, with the future Edward VIII enthusiastically accompanying him on bongos; nearly four decades later effortlessly stealing the show at his own 70th birthday party at the White House. Throughout his life, he maintained a public poise that could make the unflappable Fred Astaire look flustered by comparison.

Yet despite his constant air of courtly nonchalance, Ellington was an extraordinarily hard worker, building up, over a period of half a century, a body of work whose dimensions we are only just beginning to perceive. It can be argued—indeed it has been argued—that Ellington is America's greatest 20th-century composer. Duke himself would have elegantly sidestepped such a suggestion. "I am a musician who is a member of the American Federation of Labor and who hopes one day to amount to something artistically," was the way he once put it.

The point about his achievement is that it is, by contemporary standards, unique. Consider solely the span of his musical life. When

Duke Ellington started playing, he was a contemporary of Jelly Roll Morton, and he led a band that sported a tuba and a banjo, and sounded not unlike the commercial white dance orchestras of the day. Yet well before the end of his career, he could record, without any sense of stylistic strain or incongruity, with a saxophone player as jagged and difficult as John Coltrane. His output was as prodigious as it was varied. For a large part of his musical career, he wrote on average a new piece every fortnight. One has to go back to the Baroque masters of the 17th and 18th centuries to find a comparable rate of production. His music embraced ballads, popular tunes, concerti for his band players, film music, extended suites, sacred concerts and even a Broadway show or two.

Ellington did not spend much effort on popular songs as such, but many of his instrumental pieces picked up words and entered the bloodstream of American popular music. One thinks of "Mood Indigo," "Sophisticated Lady," "I Got It Bad and That Ain't Good," "In a Sentimental Mood," "Solitude," "I'm Beginning to See the Light" and "Don't Get Around Much Anymore." These popular songs, however, are really only a by-product of the Ellington *œuvre*. The center of his achievement lies in the repertoire he wrote and performed with his own orchestra, a group of musicians whose collective sound is one of the wonders of Western music. Various pungent, sly, rhapsodic, majestic and fierce, the Ellington repertoire has a range that recalls the Canadian critic Northrop Frye's definition of classic literature: "One can grow up inside it without being aware of a circumference."

The distinctive Ellington sound depended on such key instrumentalists as (from left to right) Cootie Williams (trumpet), "Tricky Sam" Nanton (trombone), Harry Carney (clarinet), Johnny Hodges (saxophone) and Sonny Greer (drums).



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A Conventional Youth

Unlike many of the great jazz figures, Duke did not appear on the scene with his technique already fully formed. His career was one of sustained growth and expansion, rather than the uneven rise and decline that describes the professional lives of so many jazzmen. He moved into the world of jazz from a background that had about it a certain solid respectability. His father was a Washington butler who ended up making blueprints for the Navy. "He always acted as though he had money," Duke recalled. "He raised his family as though he were a millionaire." Duke (the nickname was given him by a percipient kid on the same street) was raised by a houseful of adoring women, which may explain why Ellington was as adept at receiving compliments as he was at handing them out. His was a very proper upbringing, tempered by hours misspent in a Washington pool-hall which he fondly recalls in his 1973 autobiography, *Music is My Mistress*. For all his famous cool and sophistication, he harbored a longstanding respect for the middle class virtues of propriety, reliability, and correct grammar.

Duke's recognized talent at the time was art—he actually won a scholarship to the Pratt Institute in New York—but instead he drifted into jazz, leading small groups that provided dance music and "under-conversation" sound at parties and society affairs. By the early 1920's, Duke and his friends were making forays to New York, returning home, as Ellington put it, to fatten up. In 1924, they landed a job in a joint which, after several well-timed fires, eventually became known as the Kentucky Club. During the next three years, Duke made some crucially important musician liaisons. One was with Harry Carney, a baritone saxophone player whose vast, sonorous tone was in marked contrast to the slap-tongue, bull-frog sound of so many of his contemporaries. Then Duke recruited the trumpet player Bubber Miley and trombonist "Tricky Sam" Nanton, both dextrous masters of the plunger mute, gritty, competitive players who could summon up the most uncanny vocal effects on their instruments. The fourth fruitful partnership was with Irving Mills, an astute and tenacious agent who booked Duke into New York's Cotton Club in 1927. It was there, for the next five years, that Duke laid down the foundation of what was to become known as the Ellington style.

The Ellington Sound

The alchemy of the Ellington sound lies less in any musical tricks than in the fact that the composer was writing with specific musicians in mind. Where any other arranger voicing three parts for saxophones would give the root to the baritone, put the tenor above that and the alto on top, Duke would be liable to do things differently. Knowing the carrying power of Harry Carney's tone, he might give the baritone the most interesting note in the chord and score both the tenor and alto



On tour: Ellington smokes a water pipe with hosts in Jordan.

below it. The same process was applied on a larger scale to everything he wrote. He knew how to work with the strengths and limitations of everyone in the band, including himself. At the Cotton Club, with its elaborate stage productions, Duke had both the time and the opportunity to move beyond the functional realm of dance music. It was here that the Ellington "jungle sound" flourished and where Duke learned to coax from his bands sounds that ranged from the dark and glittering to suave serenity.

When Duke made his first visit to Europe in 1933, he discovered that both his records and his reputation had preceded him. He undertook the crossing with some trepidation, haunted, it is said, by visions of the sinking of the Titanic. But the reception he received more than made up for the discomfort of the sea voyage. The English hailed him rapturously, and the composer Constant Lambert likened him to Ravel, Stravinsky and Delius. The French declared him to be a true surrealist, and the poet Blaise Cendrars wrote that "such music is not only a new art form but a new reason for living." Duke found himself the darling of the European intellectuals, a musician with a following that included a disproportionate number of clergymen and crowned heads. The recognition he was given almost certainly encouraged him to move further in the direction of writing pieces much longer than the three minutes dictated by the 78 rpm record. It also underlined the existence of a large audience who knew the names and achievements of the Ellington sidemen. And with good reason. For by now, Duke had with him such instantly recognizable figures as Johnny Hodges, an alto saxophone

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player with impeccable timing and a pure surging tone; Lawrence Brown, a virtuoso trombonist with a plump, patent-leather sound; and Cootie Williams, a huge bearlike man who played the trumpet with stentorian power.

There is some truth to the claim that the Ellington orchestra at any given moment has only been as good as its soloists. The band's banner years were from 1939-42, when it was galvanized by the presence of Jimmy Blanton, the first modern jazz bassist, and the great tenor player Ben Webster. The recordings from those years, "Ko-Ko," "Jack the Bear," "In a Mellowtone," "Main Stem," "What Am I Here For?," are the zenith of Ellington's achievement, though at the time they lacked the mechanical frenzy necessary to attract a mass swing-crazed audience. Ellington's orchestra never had the rivet-gun precision of the Count Basie band. (In fact the two are polar opposites. Duke's talent was expansive, the Count's reductive. Where Basie pruned, Duke garlanded his music with vines.) Even so, at its height, the Ellington ensemble in full cry had a unanimity of feeling unmatched by any other big band.

Musical Authority

Curiously enough, Duke shied away from hiring stars. What he seemed to look for was assurance, a sense of musical authority and a generosity of tone. It was no accident that he idolized the New Orleans soprano saxophone player Sidney Bechet, a jazzman with a sassy vibrato and an air of complete decisiveness about his solos. Bechet had what Duke termed *call*, the ability to send messages, to call somebody, to make facts and emotions known.

Improvisation, at least in the free-rein sense of the post-Bop era, played a relatively small part in the Ellington orchestra's music. Solos tended to take on a ritual quality, their shape and outlines already known in advance. A conservative by nature, Duke would hire men who sounded like those they were replacing. Generations of Ellington brassmen had to learn the growl effects of Bubber and Tricky Sam; and when the tenor player Paul Gonsalves joined the band, he already knew the parts and the solos of Ben Webster.

Duke presided over the band with a Prospero-like tolerance. As he remarked, "I seldom have the urge or fortitude to be a disciplinarian. Nor do I have the impudence to be rude, or the gall or brass to demand order." Not that it would have made much difference; the orchestra was always a richly idiosyncratic group, as faction-ridden as a Doge's Council. The volatile bass player Charles Mingus played briefly with the band—a stint that was terminated when he had a falling out with trombonist Juan Tizol, who chased him with a bolo knife across the stage of the Apollo Theater in Harlem. In recalling his dismissal, Mingus captures perfectly Ellington's sheer verbal aplomb. The bassist was

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summoned to the leader's dressing room, where the great man was slipping a pair of elegant Cartier cufflinks into his beautiful hand-made shirt. "Now Charles," he said, "you could have forewarned me—you left me out of the act entirely. At least you could have let me cue in a few chords as you went through that Nijinsky routine. I must say I never saw a large man so agile—I never saw *anybody* take such tremendous leaps. The *gambado* over the piano carrying your bass was colossal.... So I'm afraid, Charles—I've never fired anybody—you'll have to quit my band. Juan's an old problem, I can cope with that, but you seem to have a whole bag of new tricks." As Mingus concluded: "The charming way he says it, it's like he's paying you a compliment. Feeling honored, you shake hands and quit."

A Miniaturist with Ambitions

For Ellington the band was both a luxury and a necessity: a luxury because he could have become a far wealthier man had he assembled the musicians for specific money-making purposes rather than maintaining them on a full-time basis; a necessity because the band was the only way he could compose one night and the next morning hear his music the way it should be played. "If I didn't like the way the band played," he once said, "I wouldn't pay so much to listen and write for it." Duke's rate of production did not slow down appreciably during his

A busman's holiday: the Duke in India listens to a sarod player.



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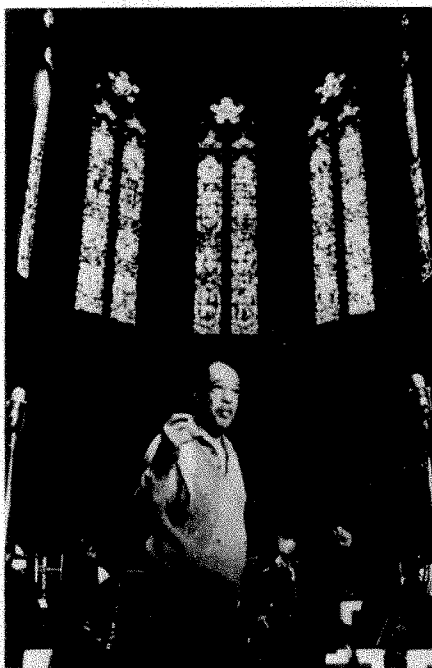
lifetime; the only change was in an increased stress on the extended works that form the most ambitious and problematic component of the Ellington *œuvre*. Critics have always had a somewhat ambivalent attitude toward the longer compositions. They tended to encourage Duke to stretch himself, to write more "seriously," and then to denigrate the results.

The problem of such longer pieces lies less in any shortcomings of the composer than in the nature of jazz itself. It is a performer's music, and its improvisatory nature has dictated a simple formal structure—one that does not lend itself to the kind of extended thematic development that is such an important feature of European music. Duke went some way toward breaking up the symmetrical, modular structure of the jazz tune. But he remained a miniaturist, a term that in no way belittles his achievement. He was at his best in short compositions that allowed him to show his supreme gifts as a romantic melodist. His extended works were essentially programmatic in nature, haphazardly connected and united more by their extra-musical content (the people or places that inspired the music in the first instance) than by any recurring or developing motifs.

From the 1945 *Black, Brown and Beige* to the 1973 *Togo Brava Suite*, few of the longer works gained any immediate public acceptance. Whether they will become a part of a regular performing repertoire appears doubtful, for Duke's music is basically an unrepeatable, perhaps

even destructible art, one that has reached its most fully realized form on record. Recently the musicologist Gunther Schuller led a group of his students in transcriptions of early records. Apart from the extraordinarily difficult problem of recreating the rich Ellington sound, the performances tended to break down when the time for solos came.

Whatever the problems of the longer pieces, there is no doubt that Ellington took the difficult art of jazz composition further than anyone else. Within the jazz world his reputation was monolithic. To a larger public he did not achieve Grand Old Manhood (or become what the Japanese call a "National Treasure") until both he and the century were in their sixties. It was then that the avalanche of honorary degrees



Ellington at Grace Cathedral in San Francisco, rehearsing a program of his religious compositions.

The Ellington Sound

and special awards began. Duke took it all in his stride, maintaining the royal "we" and remaining as considerate and courteous as ever.

Ellington's piano-playing became, if anything, better with time. Some of his obituarists pointed out that he was not a virtuoso pianist—but then, virtuosos have no place in big bands. He was a superb accompanist. His playing was angular, architectonic, and immediately distinguishable. Duke had a percussive touch and a way of leaving spaces in his solos that was clearly a major inspiration for the vinegary, dissonant style of Thelonius Monk, another musician who dwells in a musical world of his own making.

Diplomat and Believer

Duke remained, too, a tireless traveller, which was the only way of satisfying his craving for new sights and tastes. He was a natural diplomat, a quality that came to the fore during his several tours abroad at the behest of the State Department. Although he remained above politics, he was one of the more adroit defenders of the American system.

Duke was a religious man. He took to reading the Bible daily in 1935, the year his mother, whom he revered, died. One of the major frustrations of his later years was the trouble he had presenting and recording his sacred music. His own Christianity is apparent in his autobiography, the bulk of which is made up of a series of character testimonials for his friends and fellow-musicians, a group that includes Orson Welles, Stepin Fetchit, Frank Sinatra and Miles Davis. The book is a curiously self-effacing autobiography, though Duke does manage to have the last word by interviewing himself and asking all those questions which were never asked, and many questions that never should have been asked so frequently.

Q: At this point in your career, what do you think is expected of you?

A: I don't know and couldn't care less.

Q: Is there satisfaction knowing that what you have created gives you a chance to be known beyond your time? Does gratification offset the rough road you must have had to travel?

A: I have no interest in posterity. I have been very lucky and have not had the discomfort of treading the rough road.

Q: Besides God, what sustains you?

A: Not besides. How does one manage without God?

To which one can only add, as Duke said of many of his friends: "God bless Edward Kennedy Ellington."

BOOK REVIEWS

A WORLD VIEW OF ETHNIC NATIONALISM

By Murray Friedman

The reviewer teaches sociology at La Salle College in Philadelphia. He also is active in the field of interfaith and inter-racial relations. His review is reprinted from *Commentary*.

Ethnic Conflict and Political Development. By Cynthia H. Enloe. Boston: Little, Brown. 282 pp.

Ethnic nationalism, with its accompanying toll of racial and religious conflict, would seem to be on the rise everywhere in the world today. In the Middle East, Jews and Arabs have just emerged from their fourth war in 25 years, and in Northern Ireland the historic tensions between Protestants and Catholics continue to erupt into violence. In Canada there is Quebec separatism; in Belgium, increasing friction between Flemings and Walloons; in Spain, a resurgence of Basque nationalism; in Great Britain, a growing Scots and Welsh nationalist movement, in addition to the Irish problem; in South Africa, *apartheid*; in the United States, continuing racial tension. There is no escape, not even to Fiji, where descendants of the East Indian settlers are embroiled with the native islanders.

This widespread phenomenon is generally seen in terms of struggle for power between exploiters and exploited, between "colonial" authority and oppressed "subjects" (however broadly these terms are interpreted).

While there is some truth in this view, it does not apply in every instance. For example, it does not help us to understand the Biafran attempt at secession from Nigeria, where blacks battled blacks with an estimated loss of over a million lives, or Uganda's expulsion of Indians long resident in the country. Cultural differences can prove more decisive than class differences.

The New Pluralism

For Cynthia H. Enloe, who has written a most illuminating book on the subject, the phenomenon of present-day ethnic nationalism is to be viewed through the filter of the "new pluralism," a concept used by many scholars, including political scientists like Dr. Enloe, to explain a variety of social situations. As she describes it, the unitary state or nation—a comparative latecomer on the stage of history—has often joined together groups of questionable compatibility, ill-fated partners who find it difficult to forge a common national life because of differing values, special interests, or long histories of mutual conflict. Even a long-standing and seemingly stable society like Great Britain, according to historian A.J.P. Taylor, stands in danger at some future date of breaking up into its original national and ethnic components.

The ethnic mobilization now taking place throughout the world, Dr. Enloe argues, has become a means of forcing

doubts about modernity in general into the open—causing us to recognize “the elements of oppression in most political systems.” Of course, the present rise of ethnic consciousness is itself a result of the success of modernization, which equips ethnic communities with new political resources and aspirations. The most up-to-date forms of communication and transportation are available to all, even in the most remote places, and for many ethnic groups this has led to a heightened awareness of subordinate status, with all the attendant disaffections. As for the trend toward suburbanization, one of the more striking developments of the postwar years, Dr. Enloe sees this as helping to reassemble ethnic groups and strengthen group ties.

Dr. Enloe challenges the widely held view that progress in society is measured by the movement from “narrow tribalism” to the modern highly centralized, national state. She reminds us that ethnic mobilization can often be a source of innovative social and political reform, and she argues that the truly farsighted nation builders in modern history have been pragmatic shapers of multi-ethnic societies.

Minorities under Communism

Dr. Enloe rounds out her survey with an illuminating discussion of the ethnic picture in Communist societies. In the course of their efforts to overthrow the old regimes, both Russian and Chinese Communist leaders cultivated various national sentiments by promising local autonomy or even in-

dependent status to ethnic groups. However, once in power they promptly reneged on their promises and embarked on a course of centralization which demanded the assimilation of ethnic minorities.

A major problem in the Soviet Union today, widely recognized although rarely discussed in public, is how to maintain the Great Russian hegemony in such areas as Soviet Central Asia where the mostly Muslim population is rapidly and vastly increasing. In China, where the Han Chinese are the major ethnic group, non-Han Chinese are largely excluded from top posts in party leadership, even in their home regions.

Dr. Enloe's world-embracing discussion of ethnic conflict prompts a closer look at the U.S. experience with a multi-ethnic society. On the face of it, what with the bewildering array of religious, ethnic, and national groups that make up American society, it would appear that the United States is ripe for a massive social upheaval. And yet, except for the Civil War, Americans have managed to hold together as a nation and to extend social and economic opportunities to a succession of groups—Irish, Italian, Jewish, Slavic and, most recently, blacks. The effort is by no means completed, but at a time when attention is focused on the apparent failures of American society, it is important to recognize that by and large it has succeeded notably in containing ethnic frictions of the sort that are still causing havoc in so many places throughout the world.

THE CULTURE OF CLOTHING

By Anne Hollander

The reviewer has written for various journals, including *The New York Times Book Review*, from which this comment has been excerpted.

Dress and Society, 1560-1970. By Geoffrey Squire. New York: The Viking Press. 176 pp.

The subject of dress has been largely neglected by serious students of art history and the history of ideas. The field has been left to those who practice a kind of historical fashion-journalism, superficially observing the fluctuations of past modes in the light of modern psychology and sociology. For theatrical designers there are many books containing processions of historical costume examples, usually redrawn in one single illustrative style from unidentified originals, but most of these works display the sequence of past fashions as a self-contained curiosity unconnected with other cultural facts.

In *Dress and Society, 1560-1970*, Geoffrey Squire has not produced just another costume book. He has in fact written an essay to demonstrate the way fashionable clothes have themselves been a complex artistic medium with a power equal to that of painting and architecture to embody the whole esthetic spirit of a society. He has removed clothing from the category of frivolous minor art and sociological phenomenon to show how esthetic conceptions expressed in dress have again and again remade the visible world as profoundly as any school of

painting. Besides this rather obvious visual dimension of clothing, Mr. Squire has shown its indissoluble connection with mythology and literature, where conceptions of beauty, sex and society first crystallize before they are reflected in the visual images created to correspond to them. He attempts indeed to integrate dress with all the traditional manifestations of high culture, concentrating on the rich and vital High Renaissance, Baroque and Rococo centuries in Europe and England.

In his short final section "1860 and After," Mr. Squire describes an important fashion phenomenon unknown until the middle of the 19th century—the development of fashionable women's dress as "a true art, the conscious product of an individual mind which had elected to use the clothes of others as a medium for its own expression." It was only with the establishment of



the House of Worth in Paris in 1858 that women's clothes came to be "designed"—as total entities in our modern sense of the word—in an effort to approach a unified ideal image. After that, the expression of individuality on the part of the fashionable woman—both esthetic taste and personality—became a matter of choosing the work of one artist in preference to that of another.

Dress as Individual Craft

During all the earlier periods of extraordinary and elaborate clothing, the burden of creation was on the wearer, who had to make an instinctive assemblage of pieces of craftwork and arrange them herself (or, himself). Among the centuries of craftsmen in question, of course, were unsung men and women of genius, who might personally design a hood or a cape or shoes and—by the mid-17th century—even a coat, waistcoat and breeches *en suite*—that is, a suit. But the tailor or milliner never received public recognition until the days of Worth. Before the mid-19th century each modish person created his own image and was essentially the artist of himself, designing the separate elements of the combination and having them made to specifications. It is partly because of this that dress, perhaps fully as well as the paintings or statues created by the private convulsions of genius, can provide a true and steady gauge of the artistic spirit of an age.

Clothing, unlike furnishings and houses, not only deals directly with man's own body, and thus engages his deepest feelings; it also perpetually serves his desire to idealize the image

of his body, which has always been a mainspring of the creative impulse. Squire stresses this function of dress, as opposed to all its practical qualities.

It appears that dress, quite as much as buildings, books or pictures, can be a manifestation of man's urgent desire to express ideas and satisfy his mental needs, which transcend any consideration of physical comfort or convenience, and all consideration of sensible economy. In this way man can alter the appearance of all things, including himself, to fit closely to an idea....

Evolution of Styles

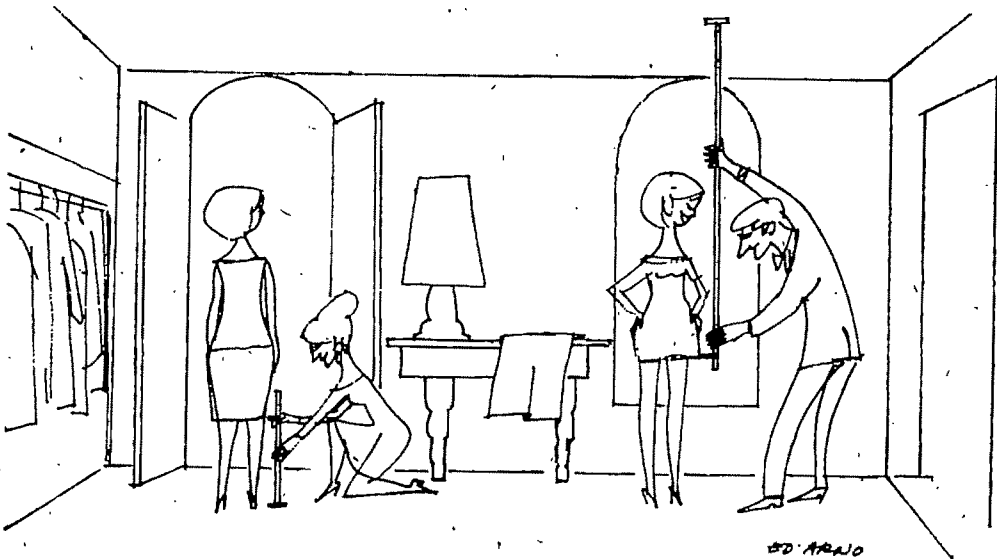
As an example of how this works, Squire describes how, in the Renaissance, the new "concern with the human" caused men to refer to the Mediterranean Classical world for terms of stylistic expression, not to copy them but to reinterpret them. Thus European male dress of the 15th century in no way imitated Greek and Roman fashion. Nevertheless, it expressed a similar desire to maintain



the natural proportions of the body while dressing it in garments of elegant simplicity designed to embellish, not hide, its beauty of form. In this case, tight-fitting garments were worn for the first time after the gowned Middle Ages, accompanied by draped capes and sleeves, as an analogue, rather than a copy, of Classical nudity with draped tunics and togas.

Writing of fashion after the middle of the 16th century, Squire invokes the art-historical term "Mannerist" to characterize the ambiguous and distorted costume of the Elizabethan and Valois courtiers. He shows their relationship to the elaborately conceited and allegorized verse of Spenser and Shakespeare and to the related emblematic quality of contemporary painting.

Supported by obvious brilliance and cultivation, Mr. Squire generalizes effectively in just the straightforward and serious tone that has been noticeably lacking in recent writers on the social aspects of dress such as Bernard Rudofsky and James Laver. In attempting to avoid soulless scholarship, these other authors (along with Cecil Beaton in the same vein) have been much more inclined to invite the reader's amusement, sometimes even getting cheap laughs at the expense of the material, than to engage the intellect. Now, however, not only intelligent readers but art historians and literary critics will find ample material in Geoffrey Squire's book for the most serious consideration, along with legitimate amusement and a great number of excellent pictures.



IS SCIENCE "SCIENTIFIC"?

By Joseph Ben-David

The reviewer is professor of sociology at the University of Chicago and author of *The Scientist's Role in Society: A Comparative Study*, as well as of a recent study of *American Higher Education*. His review is reprinted from *The New York Times Book Review*.

The Sociology of Science. By Robert K. Merton. Edited and with an Introduction by Norman W. Storer. Chicago: The University of Chicago Press. 559 pp.

The exploration of the social conditions that facilitate or retard the search for scientific knowledge has been the major theme of Robert K. Merton's work for 40 years. This collection of papers by Merton, who is Giddings Professor of Sociology at Columbia University, represents a fascinating overview of his sustained inquiry.

The papers from the first period, ending about 1945, contain a critique of the then prevailing schools of sociology of knowledge; and beyond that they lay the foundations for a sociology of science. Of course, science is a certain kind of knowledge, and properly speaking sociology of science is part of the sociology of knowledge. But for reasons made clear in this book the two fields developed separately.

The sociologists of knowledge in the 1930's were mainly interested in the question whether human thought, especially social thought, could be objec-

tive. Their conclusion was that the perception of "reality" (especially of social reality) was biased by class interests, cultural prejudices, etc., to such extent that objective knowledge was impossible.

This was a logically untenable position, since if all knowledge was subjective and relative, then this must have been true also of the sociology of knowledge. But many social scientists in the 1930's preferred to evade or circumvent this difficulty, rather than abandon the idea of the relativity of knowledge. Perhaps this was due to the rising tide of totalitarian ideologies, which seemed both to engulf all rational thought, and to support the view that all thought was biased. Merton rejected this view, and chose to investigate the sociology of science, a type of knowledge which was conspicuously neglected by sociologists of knowledge. As a result, the sociology of science, which deals with the social aspects of scientific disciplines, became separated from the sociology of knowledge, which has dealt mainly with social thought and ideology.

By choosing natural science, the "objectivity" of which was not in serious dispute, Merton kept away from the thorny question of what constituted valid knowledge, and could proceed to investigate the conditions which prompted the interest in scientific knowledge. The results of his work are contained mainly in Merton's *Science, Technology and Society in*

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Seventeenth Century England (1938). Selections from that book reprinted in this volume give a good idea of its contents. Merton addressed himself to two questions: What were the conditions that had led relatively large numbers of intellectuals in the 17th century to shift their interest to science? And what were the conditions that determined the shift in the fields and foci of enquiry *within* science: Were those shifts merely the result of the internal development of science, or of external conditions, such as economic or military needs?

Religion and Science

The questions were not original, but Merton's answers were. In addition to showing how the changing economic and class structure of 17th-century England created a positive predisposition to science, Merton showed that there were elements in the religious doctrines and practices of various Puritan sects that inadvertently enhanced this predisposition. This latter finding was surprising since it seemed to run counter to the still widespread view that science and religion were antagonistic to each other.

In fact Merton did not necessarily contradict this view. He did not speak of any official religious endorsement of science, but of the *unintended* effects of certain religious ideas. The Protestant doctrine of predestination established a new kind of relationship between God and the individual which enhanced the motivation of getting nearer to God through an understanding of his work, Nature. And the Puritan insistence on serving God in practical ways, and on rationality and empiricism in general, created atti-

tudes akin to those required by modern science.

This interpretation was supported by an imposing array of data, ranging from personal accounts by scientists such as Robert Boyle, John Wilkins and John Ray of the religious significance of the study of nature, to statistical information which showed that people with a Puritan background were greatly over-represented among 17th-century English scientists.

On the question of the relative weight of internal scientific, as against external practical, considerations in determining the shifts of interest within science, Merton showed, through analysis and by counting publications devoted to different topics, that such external needs as those of military or other technology did have an initial impact. The manufacture of guns and gunpowder drew attention to the problem of the expansion of gases, and of gas pressure. But once the problem was posed and its scientific aspects defined, scientists pursued their investigations according to the internal science uninfluenced by technological interest.

The "Vanity" of Scientists

The theoretical framework derived from the analysis of 17th-century science, although relevant, turned out to be insufficient for the analysis of the relationship between science and social values in the following centuries. The description of the values and norms of science gave a static and idealized picture of science as a social system, and did not reveal how the system actually worked. Something was needed to complement the picture, but no one knew what.

The impasse was overcome only in the 1950's, and Merton's *Priorities in Scientific Discovery* (1957) was crucial in this. The paper starts from a well-known contradiction in the behavior of scientists: Capable of combining the highest degree of altruism in and devotion to their work, they can be petty and vicious about priorities in discovery. This contradiction, which had appeared to everyone as a manifestation of human vanity, provided for Merton the clue to the understanding of how science functions as a social system.

The idea is that scientists distinguish themselves from other searchers for truth by testing it with rigorous logic and repeatable experiment. As a result they are thrown on each other in a manner no other human community is. They have to publish and diffuse their discoveries, since only through disclosure can they establish their property rights for the discovery. But because of the esoteric nature of their studies, they can obtain valid recognition only from their colleagues and potential competitors, the same people who, if dishonest, could be inclined to steal the discovery (and scientific discoveries *can* be stolen, since their value does not depend on personal style). Priority fights reveal the strains inherent in this situation.

Therefore, whether or not such fights are conducted in a civil or uncivil manner, the insistence on priority is not merely a matter of personal vanity, but one of the safeguards of the very altruism which it appears to contradict. Without it the scientific pattern of publishing and submitting discoveries to public use would be in jeopardy. With it the evaluation and rec-

ognition of scientific work becomes an ongoing process in which all scientists participate with a seriousness the significance of which had not been recognized before.

The Need for Objectivity

The discovery of these processes has helped to resolve the earlier impasse on the matter of objectivity. The norms of science, such as the duty of scientists to judge each other's work by pre-established impersonal criteria, to make results available freely to everyone, to avoid commercialism, and to practice skepticism—these idealized restatements of the methodological canons of inquiry assumed now the significance of an informal legal system.

The enforcement of the norms of this system is as important to science as is the enforcement of commercial law and custom to the economy. Therefore the extent to which these norms are adhered to in different fields and in different places is a question crucial to the understanding of the state of science.

For professional sociologists these papers represent much more than a contribution to the sociology of science. They are one of the few examples of sociology as science; of a series of discoveries based on meticulous research which have generated new research, and which have stood up to the test of re-examination over a prolonged period of time.

But what do they represent to the general public, which expects sociologists to say something of practical importance on the pressing problems of the time? Part of the answer lies in the development of Merton's thinking

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about the recurrent attacks on rationality and science, and the arguments about the relativity and lack of objectivity of all social thought. This is, of course, a problem which concerns not only sociologists, but everyone for whom the resolution of social conflicts by rational rather than violent means is important. With the renewal of these attacks on rationality in the late 1960's in much the same terms as in the 1930's, Merton has also returned to the problem.

Writing from the vantage point of what he had learned in the meantime on the structure and the mechanisms of the scientific community, Merton's analysis and conclusions are much more positive and definitive than in his earlier papers. The evidence which seems to support the relativity hypothesis is rejected now, as before, not only on logical and methodological grounds, but also on the basis of empirical evidence which shows that the objectivity of science is not secured by general social perspectives, but by the craftsmanship and integrity of the disciplinary community:

Utopian Temptations

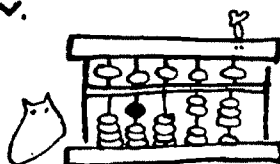
This leads us to the implied more general message of this book, which concerns the nature and the uses of social science. Engineers, industrialists and other direct users of natural science have learned not to expect the

scientist to do their own work. They know that the scientist can only translate part of reality into problems with a logical solution, and that the practical application of these partial solutions remains the art and the responsibility of others.

But everyone is a direct user of social science, and people expect from the social scientist total solutions of problems of far greater complexity than any of those that engineers have ever dealt with. They try to cast the social scientist into the combined role of prophet and magician, of one who knows the future and can also change it. Few social scientists can resist the temptation of these expectations. Merton is one of the few who can.

He shows that sociology can only do what science can do, namely reduce a subject to its logical components, where emotions disappear, and the problem becomes amenable to analysis in the light of empirical evidence. This requires the renouncement of immediate practical solutions, and the willingness to follow unexpected leads. But it is the only way in which social science can ever become *really* useful.

There are very few other books in sociology that teach this lesson as well as the present one—and none that teaches it with such meticulous scholarship, or in so elegant a style. This collection of papers is, and is likely to remain for a long time, one of the most important books in sociology.



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William Stafford
THE TERROR IN ROBERT FROST

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THE NEED FOR ALTERNATIVE TECHNOLOGIES

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BOOK REVIEWS

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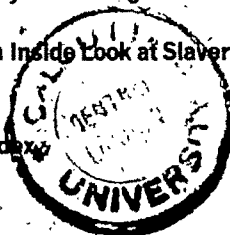
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A NOTE TO THE READER

Many thoughtful Americans are now engaging in a sometimes agonizing reappraisal of the American way of life—its institutions, assumptions, principles, achievements and defects. These are being all the more closely examined in the light of the forthcoming celebration, in 1976, of the two hundredth anniversary of the founding of the American republic.

Preceding all other questions in the search for self-knowledge is the fundamental one, having to do with the nature of knowledge itself: How well can we know ourselves? Thus, the 18th century American War of Independence was regarded at the time as a social revolution setting the new nation on a new democratic course. Later, this claim was denied. Where does the truth lie? Robert Nisbet in our special section reexamines the evidence and raises the more universal question of what we mean by "revolution."

In his turn, Max Lerner asks, what can we learn by comparing contemporary American civilization with that of ancient Rome? There are voices asserting that the United States has lost its dynamic spirit and is now entering a period of decline and fall, like the Roman empire nearly two thousand years ago. How valid is the comparison? Professor Lerner's article suggests the pitfalls, as well as the fascinations, of historical analogy.

Is it at all possible, in a time of confusion like ours, for even trained and careful observers to understand what is happening—much less to foresee the consequences? Eyewitness history, Arthur Schlesinger argues, must be balanced by a longer, more Olympian view. Thus, as C. Vann Woodward notes, all attempts by participant-observers to explain the outburst of student activism in the 1960's have fallen short, despite their erudition and brilliance.

This issue's reappraisal of traditional assumptions is not limited to the United States and internal American matters. In other articles, one author suggests fresh technological approaches that could help conserve threatened world resources; another calls for measures to assure international economic security; a third urges recognition of the ethical component in scientific work, so often scanted.

Finally, there are additional new looks: at the poetry of Robert Frost, which a century after his birth yields unsuspected and dark depths; and at folk art, which is nowadays seen to have far more in common with contemporary high art than it has been given credit for.

J.S.

TOWARD INTERNATIONAL ECONOMIC SECURITY

By Walter F. Mondale



For most countries today, writes Senator Mondale, national security depends more on the solution of worldwide economic issues than on traditional military and political strategies. He proposes a comprehensive international approach to such problems as oil, food, inflation, trade and stability—an approach that involves changed perspectives on the part of the industrialized West, the Communist nations, and the varied nations that make up the Third and Fourth Worlds.

Walter F. Mondale is the U.S. Senator from Minnesota and a prominent figure in the Democratic Party. Like Hubert H. Humphrey, his fellow-

Senator from Minnesota, Senator Mondale speaks for the liberal, farmer-labor, Midwest viewpoint in American politics. He was formerly the attorney-general of Minnesota. His article is abridged and reprinted by special permission from *Foreign Affairs*, October 1974.

Economic issues are now front and center for the world's political leaders, topping the agenda of both domestic and foreign policy concerns. The major international security issues of the last quarter-century are still with us—the competition in strategic nuclear arms, the struggle of differing political systems, the confrontation of massively armed alliances in Europe, the menace of great-power involvement in local conflict. But these are now being overshadowed by the risk that the operation of the international economy may spin out of control. For if this happens there will be no graver threat to international stability, to the survival of democratic forms of government, and to national security itself.

Just as inflation has now emerged as by far the most pressing U.S. domestic concern, so international economic policy is now our top external challenge. In terms of the scale of problems and the imagination required for their solutions, this is the area which calls for our greatest efforts. The priority we have accorded for years to traditional political and security concerns must now be given to international

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economic issues. If we do not resolve them, the security problems that may ensue could dwarf those that now remain.

Ultimately, the intensity and duration of the current international economic crisis will depend upon what governments do about it. The problems that face responsible leaders in both the developed and the developing world are beyond the control of individual nations. With the growth in economic interdependence, these problems are inextricably linked, and only a comprehensive and systematic international effort can deal with them.

Changes in the World Economy

At the beginning of this decade, the United States and the rest of the Western industrialized world, including Japan, clearly controlled their own economic security. Interdependence seemed only limited. For practical purposes the international economy *was* the economy of the Western world, which did not depend on the economic behavior of the Communist world in any significant way, and was largely in control of what it needed from the Third World.

The situation has changed markedly in the last four years. The West's international economic system is no longer insulated. Both the Third World and the Communist countries have dramatically demonstrated a capacity to disrupt it through cartel pricing of oil and massive grain purchases, respectively. In addition, 1974 has seen a "Fourth World" precipitated out from the Third. Its members are those who lack major resources or economic power. The nations in this group are more dependent, more deprived, and more aware of their deprivation than any large segment of the world's population in history.

There is a new distribution of economic power in the world and we must learn to deal with it. However, the sudden emergence of this changed economic equation is not just the result of Soviet grain purchases and the oil crisis. The impact of those developments has been directly proportional to the long-range changes already underway inside the Western international economic system.

By the early 1970's this system faced a visible breakdown in the way it managed its monetary affairs, and was already in the throes of an acute crisis of inflation—which spread from country to country. This inflation, accompanied by stagnation, was a new and bewildering phenomenon, undermining confidence in our ability to manage our industrial economies. Aid to developing countries had declined, generating increased desperation and resentment. In 1973-74, all these developments combined to form the essence of what may now be termed a total crisis: one that is both economic and political and involves the entire international system.

Fortunately, this crisis coincides with a period in which political and military security issues are muted, and some of the major divisions

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in the world are being bridged and even healed. But we must seize the opportunities presented by détente and other improvements in the international picture to deal effectively with our economic problems, or the progress we have made toward a more secure world may be undone.

The time has come to face the fact that the fundamental security objectives underlying the process of détente are now linked to the world economic situation. The economic cooperation that is required will involve us most deeply with our traditional postwar allies, Western Europe and Japan; but it must also embrace a new measure of comity with the developing countries, and include the Soviet Union and other Communist nations in significant areas of international economic life. Only thus can the present precarious period of détente lead beyond uncertain balance-of-power arrangements to the worldwide sense of common economic interest that is an essential underpinning of a relatively peaceful world.

Oil and Economic Dislocations

The economic and financial dislocations created by last year's fourfold increase in oil prices pose the most urgent set of issues with which we must deal. The first task of a foreign policy aimed at enhancing economic security should be to try to get an oil price rollback. Because of overproduction and decreased consumption there is some prospect for lower oil prices, but as a realistic matter we must also plan our economic strategy on the assumption that high oil prices will continue.

The oil price hike is like a huge tax levied on most of the world's economies. However, it is a form of taxation without representation, for the size and expenditure of this tax are beyond the control of those who pay it or of their governments. Most of the payments made to the oil producers are remaining in Geneva, London and New York, where they are recycled back into the world economy. Nonetheless, two important problems remain: first, the burden of recycling the oil receipts is threatening to undermine the stability of the international banking system; and secondly, the recycling of oil "tax" receipts is not putting funds into the hands of those who need it most. To these pressing issues must be added the longer-term problem of how to handle the continued acquisition of foreign exchange reserves by the oil-producing countries—which could total over one million million dollars by 1980.

Today oil revenues are taking the form of short-term demand deposits in European, and increasingly American, banks. Meanwhile, the banks themselves must make longer-term loans for normal purposes such as capital investment, and also to help governments meet the balance-of-payments cost of the oil price increases. The possibility of being caught in the squeeze (borrowing short and lending long) is real, particularly since no one knows how volatile the oil funds will prove to be.

Banks are also being pressed to hedge against potential exchange rate fluctuations stemming at least in part from the balance-of-payments drain of higher oil prices. This can involve extensive foreign exchange dealings of the kind that drove the Franklin National and Herstatt banks to the wall.

The private international banking system must not be asked to take on alone this task of recycling oil receipts. Not only is it too great a burden on the system, but it also means that the recycling, the loans that are made, will be on the basis of commercial criteria when larger political and security objectives often should be controlling. Thus we find bankers understandably concerned about the credit-worthiness of countries such as Italy, when unfortunately the overriding issue is whether democracy will survive or be replaced with a far Left or rightist revolutionary regime—with profound effects on NATO and stability in the Mediterranean.

To ensure that such political and strategic requirements are met, and to calm the anxieties of the international banking community, governments must now take on the task of reapportioning credit and financial resources. Acting together with the central banks and the IMF, governments must in some fashion assume the responsibility of lender of last resort. Clearly, certain safeguards must be built in so that private banks do not have blank checks that they can cash to save themselves from the consequences of imprudence and mismanagement. But this risk is far less significant than the risk of collapse of major financial institutions and even of governments.

Such support for the international banking system, hopefully, will be sufficient to meet the reallocation problems of the industrialized countries without the need to resort to large-scale direct government aid, although such a possibility has been the object of lively debate among policy planners in Washington throughout the summer of 1974.

Help for the Fourth World

For the have-not nations of the Fourth World, however, a substantial governmental aid effort is required. The poorest countries— primarily on the Indian subcontinent, in Africa, and in parts of Latin America— are suffering severely from the oil price hike. It has been estimated that the increase in the oil bill for the developing countries in 1974 more than cancels out the aid they are receiving. The skyrocketing costs of food and fertilizer are equally large. As a result, the developing countries face a total increase in import costs this year of \$15,000 million, which is twice the amount of all the aid they receive. The special \$3 billion oil loan facility set up in June by the International Monetary Fund (IMF) will be of some help, but because of the IMF's formula for lending to its 126 members, the poorest countries cannot get sufficient assistance from this source.

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Additional help is needed; it can take many forms, from financial assistance to concessional sales of food, fertilizer and energy. The U.N. Secretary-General's effort to develop a special emergency fund or the IMF's "Committee of 20" proposal for an IMF-World Bank joint Ministerial Committee on aid to the less-developed countries could become the means to work out a package of emergency help. Moreover, this joint Ministerial Committee holds out the possibility of becoming a much needed vehicle for more long-term planning and greater support for international economic development.

Whatever the means of international cooperative action, the main need now is for the United States, the other industrialized countries, and the oil-producing countries to make a firm commitment. We have to stop waiting for the other fellow to act; as a practical matter this means the United States must take the lead in proposing a specific commitment for itself. Once that decision is made, the logjam should break on other countries' contributions. Then we can turn to the resolution of technical issues, such as whether assistance will be in the form of debt rescheduling, food assistance, or any of the other alternative possibilities.

A New Pattern of Cooperation

Even though American leadership is essential, the United States cannot, and should not, become the primary source of increased development assistance—which by 1980 should amount to an estimated \$12,000 million to \$13,000 million annually according to a World Bank study. Along with Western Europe and Japan, the oil-producing countries and the Soviet Union need to pick up their share of this responsibility. The oil-producing Arab countries in particular will soon have massive reserves and liquidity. By the end of this decade it is estimated that Saudi Arabia, Kuwait, Qatar, the United Arab Emirates and Libya may accumulate up to \$966,000 million in reserves. A significant part of this should somehow be brought to bear on the plight of the Fourth World.

Thus the outline of a new pattern of cooperative effort can be envisioned. The oil-producing countries should be granted a larger role in the IMF and the World Bank, where today they have too few executive positions. The developed countries could make commitments to protect the equity investments of the oil-producing states in their countries in return for appropriate assurances about the stability of such investments. In addition, the oil producers should put some of their reserves into the international lending institutions and engage in long-term aid to the less-developed countries (and possibly provide some short-term balance-of-payments assistance to troubled developed countries). Such a broader distribution of oil producers' revenues would also serve to reduce somewhat the volume of short-term bank deposits, ease the

pressure on the banking system, and limit the size of equity investments in the developed countries.

The difficulty in arriving at such a new pattern of relationships and responsibilities cannot be overstated. The oil-producing nations have so far shown little enthusiasm for helping the countries of the Third or Fourth World, apart from Arab nations and a few others with whom they seek special ties. But there are a few encouraging signs, too. The World Bank is apparently finding it possible to borrow from Saudi Arabia, Kuwait and even Venezuela, and if the rate is not exactly concessional (reportedly eight percent), it is a step in the right direction.

If some such pattern of greater cooperation is to come about, American leadership is again essential. The United States has the largest single voice in the World Bank and the IMF. It is our overall support that reduces the risks to the oil producers who are channeling funds to the less-developed countries through loans to the World Bank. The United States is the greatest potential market for Arab equity investment, and the response of the American government in providing assurances and establishing rules for such investment is likely to set the standard for the rest of the world.

Inflation and Recession

We must also give priority attention to the international dimensions of inflation and the threat of recession. Inflation is the most politically regressive force at work in the world today. It has been said that no country has ever had an inflation rate of more than 20 percent and continued with a democratic government. There may be no magic in this figure, just as there is little precedent for our current situation. But it is sobering to recognize that the United States is about halfway to this rate of inflation, Britain and France are approaching it, and Italy and Japan have been beyond it. Elsewhere, among semi-industrialized and developing countries, rates are usually far higher.

Even apart from the impact of the oil price hike, the present economic situation is essentially unprecedented. The international economy, characterized for decades by boom-and-bust cycles, was brought under reasonable control after World War II. The objective of full employment was for a time achieved in most developed countries through Keynesian management. However, "stagflation"—high inflation and low growth—began to appear in the 1960's in Great Britain and elsewhere. Now we have what *The Economist* has called "slumpflation," in which there is recession or zero growth while inflation is soaring.

Unfortunately, our comprehension of the problems involved in this phenomenon has not kept up with our vocabulary in describing it. There is grave concern that no one really understands the present economic conundrum, nor knows how to deal with it.

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This concern is exaggerated. The monetary and fiscal tools of economic management *can* be adequate to deal effectively with the present situation. What we need are new, more selective measures for the domestic application of these tools, and a new appreciation of the need to take into account the international aspects of our economic difficulties.

Thus, although controlling inflation is preeminently a national responsibility, several cooperative international efforts can be envisioned. Adequate international funding for oil-generated balance-of-payments deficits will help avoid devaluations and the consequent boost to inflation. The balance-of-payments objectives of the major trading countries should be brought into line. Efforts to coordinate monetary policy, an elusive objective in the past, deserve renewed emphasis. Each country should try to assure that its domestic policies are not really exporting inflation or unemployment; and all must avoid beggar-thy-neighbor reactions.

In effect, industrialized countries must coordinate their overall economic programs concerning growth, inflation and employment. The United States cannot, for example, consider unilaterally embarking on a policy of controlling inflation by two or more years of stagnant growth, oblivious to the fact that this could lead to a major recession in Europe. Similarly, ill-considered policies adopted by other nations can have a seriously adverse effect on the U.S. economy. The United States therefore has an important stake in better international economic coordination, whether through existing institutions or through the creation of some new, more efficient international mechanisms.

Removing Trade Barriers

The handling of trade policy will have a major impact on whether we are effective in fighting inflation and holding the line against recession. In the short run, the most urgent task is to head off increasing pressures for trade restrictions. To contain such pressures, it is imperative to revitalize the long-immobilized trade negotiations. The Europeans and Japanese, once reluctant participants, are now eager to move ahead before protectionist pressures in their countries intensify to the point that negotiations become impossible.

A major long-term issue, which should be given priority attention at the trade negotiations, is the issue of access to commodities and raw materials. The rules of the General Agreement on Tariffs and Trade (GATT) focus on the problem of access to markets. What is also needed are rules and other arrangements providing for fair access to sources of supply at reasonable and stable prices.

The impulse to assure access to supplies is *not* a new form of colonialism. First, while the oil price increases are one obvious example of the kind of harmful price-fixing that should be brought under control,

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it is important to recognize that this is not solely, or even primarily, an issue between the less-developed and industrialized countries. The U.S. embargo on soybeans, the Japanese embargo on fertilizer, and widespread controls on scrap iron are all examples of steps by industrialized countries inimical to international economic stability.

Second, complicated equities are involved. Supplier countries which are also underdeveloped have an economic and moral case for an increased return on their products. Cartel pricing of oil and the efforts to build producer cartels in bauxite and copper are in part aimed at redressing what developing countries have always considered unfair terms of trade. Rightly or wrongly, they have felt that the industrialized countries set the price of their commodity exports as well as the price of their imports, and did so to the developing countries' disadvantage.

Third, there may be justifiable reasons for individual countries to impose export controls in legitimate short-supply situations. However, the objective of such controls should be to allocate the short supplies equitably between the domestic economy and foreign purchasers, and not solely to export inflation! Otherwise export controls can lead to retaliation, disruption in trade, and further disorder in the international economic system.

Stability in the price and supply of commodities is important if we are to deal with inflation over the long term. In comparison with other goods, most commodities were, until recently, low priced, and there was a low rate of investment in producing them. With the surge in demand in 1972-73, production could not respond, causing shortages and large price increases. New investment in commodity production will bring the cycle down again, but this wide up-and-down swing in commodity supplies and prices is both wasteful and inflationary. To deal with this issue, as well as to head off pressures for further cartels, means must be found for stabilizing individual commodity prices and supplies to the extent possible.

U.S. as World Food Source

The United States bears a special responsibility and burden in this regard. We are now the major source of foodstuffs traded in world markets. Since 1971 U.S. farm exports have more than doubled, and in 1973 they amounted to \$18 billion. The United States and Canada control a larger share of grain exports than the Middle East does of oil. The world has literally come to depend on U.S. agriculture for its well-being. At the same time, the surge in world food demand has also directly affected inflation in the United States. The temptation to resort to export controls, as we did briefly for soybeans in 1973, could well recur.

The creation of a world food reserve is urgent. This is a complex problem, made more difficult and pressing because American and

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Canadian reserves have been drawn down to perilously low levels in recent years. They should now be reconstituted; but if they are to form the bulk of a world food reserve (designed both for price stability and to meet famine situations), others must act in parallel, and the direct and indirect costs must be fairly apportioned. It is inconceivable that the United States could take on the task of world food supplier through a reserve system, while markets for American food exports are restricted and denied by trade barriers.

Soviet Role in the World Economy

The task of working out suitable forms of economic cooperation on the foregoing issues will fall mainly to the industrialized market-economy countries and to a lesser extent, to the developing countries. However, the actions of the Communist world can either help or hinder these efforts.

Today the Soviet Union and the other Communist countries, including China, are at least superficially insulated from the economic tides sweeping the rest of the world. But, as we saw in the 1972 Soviet grain purchases; their erratic actions in world markets can have profound effects on international economic stability and, in particular, on inflation.

The problem is how to integrate the growing volume of economic transactions with the Communist countries into the world economy. We need to find ways to deal with the issue of unfair pricing and dumping on the one hand, and massive unpredictable interventions in short-supply situations on the other. The dumping issue will be difficult because the Communists' concept of price, and its function in their economies, is totally different from that in the non-Communist world. The issue of emergency buying also will be difficult, not least because the Soviet Union and other Communist countries do not perceive it as a problem. But a start can be made by pressing the Soviet Union to play a constructive role in alleviating the world food situation—at least to the extent of agreeing to provide the U.N. Food and Agricultural Organization (FAO) with all relevant agricultural information, and not jumping into the market for large quantities of food without warning. And the Soviet Union should participate directly in whatever arrangements can be worked out for international fertilizer supply and for a world food reserve.

The Soviet Union is also potentially a much greater source of economic development assistance than it has been to date. Total economic aid by the Soviet Union in 1973 was only \$622 million, while its military assistance was estimated at \$1,700 million, nearly three times as much. With the less-developed nations in such desperate condition, the Soviet Union should be persuaded to reorder its aid priorities.

Finally, the Soviet Union must be brought to realize that the need to exercise restraint in East-West political competition has an economic dimension as well. Certainly progress toward a reasonable and viable Arab-Israeli settlement is fundamental to a lasting arrangement on oil supplies and prices, and this in turn is a major economic security interest of the United States and its allies. This is an additional reason why, if the Soviet Union imposes obstacles to peace in the Middle East, it will be running grave risks of jeopardizing improved East-West relations.

We must, of course, have no illusions about the difficulty of moving the Soviet Union to recognize the long-run interest it has in cooperating in these areas. Soviet officials often regard the raising of legitimate trade problems as being "anti-détente." Economic aid to the less-developed world has always been regarded as a political weapon.

Yet, the Soviet Union's hopes for basic internal improvement—hopes central to the power position of the Soviet leadership—hinge on the development of much closer economic ties with, and in effect greater economic assistance from, the industrialized world. Hence it should be in the Soviet interest to involve itself more responsibly in world economic cooperation. Indeed, the West is now justified in making such cooperation a central test and touchstone of détente. Western credits and peaceful non-strategic trade should be related to commitments on the part of the Communist countries to work out a reasonable code of economic behavior with the Western market-economy countries, and to participate in the new aid effort required for the developing countries.

Outlines of an International Economy

From this examination of the specific immediate and long-term actions now required, it is possible to envision the general outlines of a system of international economic security:

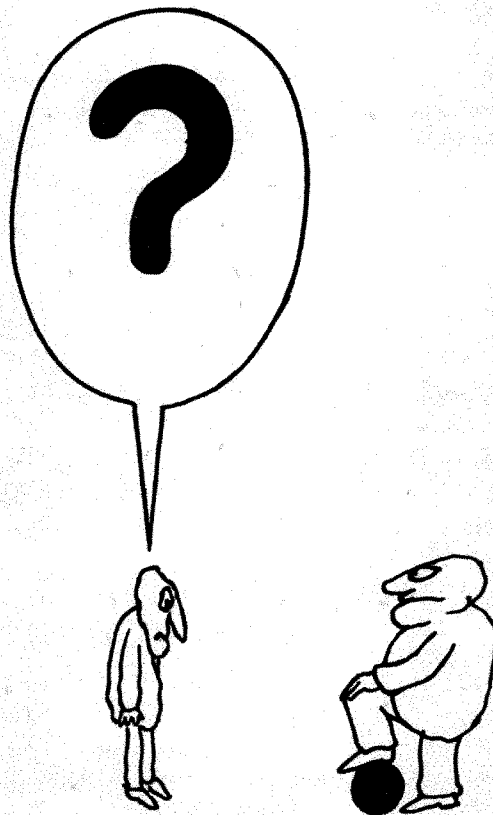
- A deeper measure of coordination of national and international economic policies among the industrialized nations in Europe, North America, and Japan.
- A new role for the oil-producing countries in the management of the international economy, and new responsibilities for aiding stability, growth, and, in the poorest countries, economic development.
- A new relationship between the industrialized and raw material producing countries assuring more stable prices and supplies.
- A more constructive involvement of the Communist countries, particularly the Soviet Union, in world trade and the task of economic development.

Not all of these broad objectives should be pursued at the same time or with equal vigor. Some of the specific issues in the present crisis are clearly more urgent than others, and for a few problems there may not be ready answers. But the important thing is that U.S. policies be

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informed by a comprehensive vision of a stable, cooperative world economic system.

Because international economic issues bear so directly on domestic concerns, moving toward a new system of international economic security and making it our first priority in world affairs could provide a basis for rebuilding the consensus among the American people in support of a revitalized and constructive foreign policy. We must redefine foreign policy and national security to include not only the concern over strategic position and political influence, but also the basic issues of inflation, economic stability, jobs and growth. If such domestic needs gain a prominent place in our diplomacy, the American people may be willing (as they have been in the past) to accept short-term sacrifices in order to achieve the long-range goals of greater stability and security for the developed countries, and a fairer share of the world's wealth for the developing nations.



S. GROSS

Drawing by S. Gross; © 1973 The New Yorker Magazine, Inc.

THE TERROR IN ROBERT FROST

By William Stafford



A decade after his death and a century after his birth, the reputation and achievements of Robert Frost are being reassessed. Frost is, with T.S. Eliot, one of the handful of 20th-century poets whose work is valued outside the usual small circle of lovers of the art. He is read all over the world, by school children and statesmen alike, in translation in many languages as well as in the original English.

Professor Stafford, himself a highly regarded poet, argues with the view that Robert Frost is a simple, direct "man of the people." He maintains that it is the complexity lurking under the surface of Frost's lucid lines that makes him an outstanding representative of his age. His article is excerpted from *The New York Times Magazine*.

William Stafford, author of several collections of poems, including *Allegiances* and *Someday Maybe*, is a professor of English at Lewis and Clark College, in Portland, Oregon. He has been Poetry Consultant to the Library of Congress, and has lectured and read from his own poetry at universities in Europe and Asia.

In the centennial year of his birth, it looks as if Robert Frost has become America's foremost poet. His picture is on a stamp; his residences are marked; his books and books about him are everywhere.

Even before his death in 1963 the land was his. At the age of 86, he came alive before the nation when he recited "The Gift Outright" for the inaugural of President John F. Kennedy in 1961. It began with the memorable lines:

The land was ours before we were the land's.
She was our land more than a hundred years
Before we were her people....

He was already an emblem, the old man in the wind reciting those lines. He had spent hours memorizing another poem written for the inaugural, but he could not complete the job in time. He felt ashamed, he said. But he caught the world's attention, and he went on — citations in Congress, a spectacular talk with Khrushchev in Russia. He became national, international.

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I'm going out to clean the pasture spring;
I'll only stop to rake the leaves away
(And wait to watch the water clear, I may)
I shan't be gone long.—You come too....

These lines are fit for public occasions and for anthologies. And his picture seems like that too — a sturdy, gray school poet, patriotic, kindly.

But, “don’t trust me too far,” Robert Frost warned. He liked secrets and we still cannot trust him too far.

Thirty-nine years old when his first collection of poems appeared, Robert Lee Frost was a late achiever. The collection, *A Boy's Will*,

Robert Frost, 1874-1963.



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was published in England, after he had given up teaching, given up farming, sold the farm for \$1,900 and taken the money to sustain him and his family in England. With the appearance of *A Boy's Will*, Frost's literary fortune began to turn.

By 1915, when his second book, *North of Boston*, had been published (again, in England), he was ready to take his homesick family back to America. So, about the time when a "lost generation" of American writers like Hemingway, Fitzgerald, T.S. Eliot, and Dos Passos were preparing to turn to Europe, Frost characteristically turned home, when the favorable notices and reviews he himself had sent earlier were appearing in various U.S. publications.

Public Praise and Private Fears

This was the turning point. With that beginning, the surge of popularity and recognition lasted for 50 years, during which Frost won the Pulitzer Prize for Poetry four times, received honors from more than 40 universities at home and abroad, was elected to the National Institute of Arts and Letters and the American Academy of Arts and Letters, served as consultant in poetry to the Library of Congress and lectured far and wide — and often — to large crowds. His image and his poems found their way everywhere — while shadows tugged at his career.

The public did not know of these shadows, but they were dark and very real. Lesley Frost has told about a midnight scene when she as a child awoke to find her father waving a revolver toward her mother, and threatening: "Take your choice. Before morning, one of us will be dead." All through his life, Frost suffered extreme fears, rages, and jealousies. In the poems, however, dealt out carefully in patterns through the 1930's, readers can find only surface assurances.

Even poems about loneliness allow upbeat endings, as in "The Tuft of Flowers," with its couplet at the end:

"Men work together," I told him from the heart,
"Whether they work together or apart."

But lurking in the easy rhymes are strange surfacings, even in the milder poems; and now and then, in ambush, are poems like "Out, Out," a matter-of-fact recital about a buzz saw rattling in the farmyard, the sister coming to announce "Supper," and then:

At the word, the saw,
As if to prove, saws knew what supper meant,
Leaped out at the boy's hand, or seemed to leap...
They listened at his heart.
Little—less-nothing!—and that ended it.
No more to build on there. And they, since they
Were not the one dead, turned to their affairs.

The Terror in Robert Frost

Usually, the poems are much less drastic, but the bland voice quietly carrying readers across chasms cannot prevent terrible glimpses. The poems often veil and, at the same time, hint at elements too abrupt, too full of hurt, for direct presentation. An early example comes from an event that almost wrecked the poet's life. Lawrence Thompson explains it, in *Robert Frost: The Early Years*, as part of the tangle when Frost was estranged from Elinor White (who later became his wife). After Elinor had begun to see a rival — a formidable one — Frost made an almost suicidal journey, never fully explained, to North Carolina's Dismal Swamp in the fall of 1894. For three weeks, he wandered, often in hunger and cold, his feelings exactly reflecting the miserable environment through which he moved. When he returned, beaten, with no change effected in his relationship with Elinor, he pretended recovery, even telling an editor he had "just returned from experiences so desperately absorbing that I am nothing morbid..." Yet that sojourn in the Dismal Swamp was background for the graceful poem "Reluctance."

Out through the fields and the woods
And over the walls I have wended;
I have climbed the hills of view
And looked at the world, and descended;
I have come by the highway home,
And lo, it is ended.

The leaves are all dead on the ground,
Save those that the oak is keeping
To ravel them one by one
And let them go scraping and creeping
Out over the crusted snow,
When others are sleeping.

And the dead leaves lie huddled and still,
No longer blown hither and thither;
The last lone aster is gone;
The flowers of the witch hazel wither;
The heart is still aching to seek,
But the feet question "Whither?"

Ah, when to the heart of man
Was it ever less than a treason
To go with the drift of things,
To yield with a grace to reason
And bow and accept the end
Of a love or a season?

Such a poem exemplifies Frost's work; the difficulties in his life are woven and muted — and, at the same time, shown in relief. The tangibles mentioned are local, apparent, common — nothing overtly

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foreign, no bows toward tradition, nothing to link to the fashion of T.S. Eliot or Ezra Pound, nothing of the dandy, nothing *difficult*. The cadences are easy. The voice wanders without emergencies. So much is under control that one can read it all quietly — and feel soothed, if that is what one wants. But those local, apparent, common tangibles, and those easy rhythms, carry meanings that “scrape and creep” toward you. So much is “descended.”

A Tool For Others?

What many readers accepted with calm — the easy feeling of such verses — was what alienated Frost's tougher contemporaries. How could he allow a line like “The heart is still aching to seek”? Where is the irony? But it was exactly that directness which brought Frost the regard of a particular group identified by Malcolm Cowley in a 1944 article called “The Case Against Mr. Frost.” “Some of the honors heaped on him,” Cowley wrote, “are less poetic than political. He is being praised too often and with too great vehemence by people who don't like poetry.”

The “people who don't like poetry,” Cowley added, “are using Frost as an excuse for berating and belittling other poets, who have supposedly fallen into the sins of pessimism, obscurity, obscenity and yielding to foreign influences....” Frost's rippling poems were then — and are now — accepted by many readers who turn from the allusions or the literary overtones of writers like Pound, Eliot and Stevens. Similarly, Frost's forthright country wisdom appeals to many who are distrustful of leftish intellectuals. Those who have championed Frost have often done so on the grounds of his being clear, patriotic and direct. Furthermore, Frost allowed himself to be so used; he seemed to delight in taunting his fellow writers and the critics — accepted by many readers, he was intelligent enough to be effective.

Cowley's article identifies the disquiet some felt about Frost's eminence during that period. Even today there are resentments about the way he is used. In the 1940's and the early 1950's, however, Frost began to be redeemed by new styles in criticism. One of the critics who crossed from the literary side to proclaim Frost was Randall Jarrell. He sorted out poems and demonstrated their powerful effects. In his 1953 essay, “To the Laodiceans,” Jarrell refers to the days “when ‘serious readers of modern poetry’ were most patronizing to Frost's poems.” To counteract such an attitude, Jarrell uses the poem “Design” to show the terror present in apparently easy lines:

I found a dimpled spider, fat and white,
On a white heal-all, holding up a moth
Like a white piece of rigid satin cloth—
Assorted characters of death and blight
Mixed ready to begin the morning right,

The Terror in Robert Frost

Like the ingredients of a witches' broth—
A snow-drop spider, a flower like a froth,
And dead wings carried like a paper kite.

What had that flower to do with being white,
The wayside blue and innocent heal-all?
What brought the kindred spider to that height,...
Then steered the white moth thither in the night?
What but design of darkness to appall?—
If design govern in a thing so small.

The "Stilling Rigor of Death"

Jarrell points out how the details are "so diabolically good" for this "Devil's Mass," how "full of the stilling rigor of death that 'white piece of rigid satin cloth' is." By calling attention to details, Jarrell showed how Frost's apparent casualness really made use of understatement by reversing the classic "argument from design" so openly used by simpler poets or writers of a simpler time. Jarrell helped rescue Frost from versifiers, and brought him to the attention of readers who would appreciate the understatement of symbols used in their ordinary form without the label "literary."

Thus, from the literary side, Frost began to be appreciated for the direct effect of the things he casually mentioned in his poems: Symbolic meanings leaped from country things. It became more and more recognized that Frost had proved again in modern times the continued power of an old device, the pastoral mode. John F. Lynen makes the point that while the language of the poems is not "modern" the themes are. Quietly, in apparently effortless talk, Frost is able to shock the reader.

It was this realization that brought Frost into greater favor in literary circles as the 1960's came on. In 1959, when Lionel Trilling, at a dinner honoring Frost, said his poems were "terrifying," the remark startled many. As Allen Tate expressed it, Trilling's statement "breached the Chinese wall of adulation around Frost." But many of Frost's poems *are* terrifying, and this realization that shook many of his former admirers has made him a serious poet in the minds of many current readers.

For one thing, his vision is not a sustained, reassuring vision for the young. He seems as frightened as Pascal by "the awful silence of those infinite spaces"—and without Pascal's faith:

What is this talked-of mystery of birth
But being mounted bareback on the earth?

For those who wanted reassurance from so public a man, there often came cutting remarks. Elizabeth Shepley Sergeant reports one such utterance: "Know what the difference is between me and T.S. Eliot?

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I play euchre. He plays Eucharist. We both play." Moreover, he was often coldly matter-of-fact about man's ultimate bafflement. Even his most well-known statements, sometimes meant to reassure, lend themselves to a second look. When he calls a poem "a momentary stay against confusion," one can emphasize either the "stay against confusion" or "momentary."

He has often been blamed for not offering a sustained vision. In fact, he does often treat human concerns as trivial in the face of outside events and forces. He is thus sometimes blamed for lack of depth. The wistful want him to be encouraging, since they need bravery. They find, however, that he is their poet, and he is scared.

Attempting to explain some of Frost's unkindness to contemporary and rival poets, Lawrence Thompson traces a clear pattern through the poet's entire life: He was a sensiblist, a being who felt a great darkness in the world and a great need for inner and outer defenses. He said: "I expect to have to go depths below depths in thinking before I catch myself and can say what I want to be while I last." Toward the end, he had gone deep, not just from bereavements—wife, child, friend—and not just from unusual blows like the insanity of his sister, Jeanie, and the suicide of his son, Carol, but from ancient guilts and jealousies that tangled in his consuming drive for success. After the death of his wife in 1938, he made a pilgrimage to the Derry farm, the farm of his family's life before England. "The place," he later wrote, "is bad with good memories, but so's the whole world." For him, in such a world, art was much more than it might seem to others. Art became an act of constantly weaving a safety net under experience. For him,

the background is hugeness and confusion shading away from where we stand into black and utter chaos; and against the background any small man-made figure of order and concentration.

For a modern reader, then, Frost's poems call up a life vision so much contrasted with current trends that the vision makes us terribly aware of how bereft we are of those comfortings that used to reside in that language. Frost walks through the valley of the shadow and fears evil. His modernism is at a level deeper than the stylistic level, and the sustained effect of his poems is more satisfying than the surface modernism of many of his contemporaries. Frost's poems reflect a disquieted, anxious being in a world without boundaries or assurances—a being too well informed for courage, given the world as it is. As a man and a poet, Robert Frost is not who we thought he was.

Reappraising U. S. History

AMERICA: DECLINE AND FALL?

By Max Lerner



During the last decade, the United States has faced a number of crises, testing its domestic stability as well as its position in the world. Inevitably, troubling questions have been asked both at home and abroad: Is American society wrestling with its doom? Is there a meaningful analogy with the decline and fall of the Roman Empire? In the following article, a distinguished political scientist offers his reflections and tentative answers.

Max Lerner is professor emeritus of American civilization at Brandeis University in Waltham, Massachusetts. He is a syndicated columnist, editor and author. Perhaps his best known work is *America as a Civilization*. His article is abridged and reprinted by special permission from *Foreign Affairs*, January 1974.

Americans have always turned inward, into an awareness of themselves as a people—their provenance, their image in history, their mission in the world. Lately this self-awareness has taken on overtones of a sense of being at the end of the tether, a mordant feeling of disintegration and decay. In the early years of the republic, American nationalist identity had a healthy, assertive braggadocio about it. This seems in recent years to have been replaced by a Hamlet-like loss of self-confidence, with an apocalyptic sense of doom for the civilization. On the right it embodies a conviction that the sensate culture is pushing the society to destruction. On the left there is the vague sense that America is imperialist, fascist-oriented, caught in inner contradictions of class and ethnic struggles which will end in self-destructive wars or civil chaos.

How valid is the idea of America's decline and fall? We have grown accustomed to think of the "tenure of world power" as a succession

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of historic hegemonies, from Babylon, Persia and Alexander's Hellenistic empire to today. But the current global realities bear no more resemblance to dynastic European politics from Rome to Napoleon than the internal realities of an imperial democracy like America resemble the administration of the Sun King, Louis XIV, at 17th-century Versailles. Some scholars and commentators, however, still seem to think in the archaic terms of the rise and decline of a single hegemony.

The Varieties of Global Power

Those who write elegies over the end of American global power fail to distinguish between *imperium* (a power mass) and *imperialism* (the expansion thrust). A hegemonial domination like the *Pax Romana*, or Henry Luce's vision of an "American century," has been made archaic by nuclear weapons, political warfare, the technology of instant communication, an interdependent global economy, and even the incipient rise of a world community of conscience.

This doesn't mean that competitive struggle among the great powers can be written off: in fact, along with *détente*, the moves and counter-moves of the great powers in vying for allies, prestige, credibility, and access to resources have become the essence of global politics. But however perilous and unstable the present arrangement, teetering always on the edge of holocaust, it does not allow for hegemonial domination. Massive imperialist interventions—be they American or Russian—are no longer viable. But neither are the current forms of neo-isolationism or neo-quietism.

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History has many cunning passages, contrived corridors.
And issues, deceives with whispering ambitions,
Guides us by vanities.

T.S. Eliot

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True, America no longer holds—if she ever held—the world supremacy she was presumed to have after World War II, under Presidents Harry S. Truman and Dwight D. Eisenhower. But a reading of the political diplomatic memoirs of that period recalls the fears and defensiveness American policy-makers felt about containing Soviet expansionism and the rise of Chinese communist power. What dominance America held was more by reason of the wartime battering of Europe and Russia and the early monopoly of the atomic bomb than by some assertive vigor or high wisdom from which she has fallen away.

My hunch is that the Golden Age of America's international role (the decade directly after World War II) was not nearly as golden, nor is the present one as leaden, as portrayed. If there has been a decline

in the American position, the indices of production fail to show it; nor do those of research and development, nor of scientific creativeness.

The contrivance of the multinational corporation must be seen—with all its vulnerabilities—as an act of economic resourcefulness in cutting through the restraining bounds of the nation-state. It has become a characteristic form of the American imperium, far more so than aircraft carriers or marines or the sale of weaponry. The multinational corporation does tend to weaken the balance-of-payments picture and thus America's dollar position; and it has at times, to use Raymond Vernon's term, held "sovereignities at bay," and furnished a target for anti-American feelings. But *other* advanced industrial nations have taken over this American institution to further their own bargaining position, and in autos, oil, aluminum and other industries there has been, in effect, an exchange of hostages to assure fair treatment for the multinationals of both sides.

What has happened is not so much the decline of American power as the proliferation and reshaping of all forms of global power. If this is true of the multinational corporation, it is true also of the trading and monetary interdependence of nations. The dollar is weak in part because of the thinning out of the work ethic and the expansion of the consumer ethic—but also in part because the new free movements of capital seek small marginal advantages which instant communication makes possible in the new global capital market.

The "energy crisis" of the Western world is also an outgrowth of this interdependence. The effort of the Arab oil-producing states to use the "oil weapon" as the prime coercive factor in influencing American policy-making in the Middle East will have some short-term victories. But, in the end, the food production, technology, and the scientific inventiveness of free societies should make them resourceful enough to resolve the impasse.

The New U.S. Diplomacy

Is America a giant with feet of clay? Yes, in the sense that all the great powers are such giants today, because somewhere in their tangled needs there are vulnerable areas that make isolation or autonomy impossible. A political elite that has its blind spots and has made its blunders? Yes, decidedly. A rigid elite, incapable of learning from its blunders and transforming its policies? No, decidedly not. An innovative giant, for all his faults, capable of taking the lead in peace initiatives and of a more scrupulous perception of the global realities? Yes, I think so.

I have set down this litany of questions and responses in order to get at the real rather than fancied weaknesses and strengths of the American imperium. The Truman-Marshall-Acheson foreign policies had a generous creativeness along with their tough-mindedness. NATO

and the Marshall Plan were models in their convergence of the idea of power with the power of ideas. But later the anti-Munich idea, that the danger to the world community centered in a single state power, became a distortion of perceived reality—a good idea at the wrong time, in the wrong place—exerting a tyranny over the minds of intelligent, otherwise pragmatic men.

The test of the Nixon-Kissinger—and the Ford-Kissinger—“new diplomacy” will similarly come on the issue of perceived reality. This diplomacy was no mean, grudging change of direction under duress. It was a large initiative, largely conceived, and—at least thus far—shrewdly worked out within the framework of détente. The idea of linked national interests, and of linked concessions and gains within the frame of an equilibrium of power, goes back to the beginnings of modern diplomacy, but is also as new as the latest evidence that the world is interdependent and that world order is more crucial than any nation’s dominance.

What has thus far been achieved mostly by personal diplomacy will now have to be institutionalized. In the end it will have to be constitutionalized. It is a large order, and may fail. But what alternatives do the great powers or the rest of the world have?

What counts for America is not whether the hegemony still belongs to her or has shrunk, but the fact that in the 25 years from Marshall to Kissinger, she has generally had a clear perception of operative world realities, and made such a perception persuasive. This capacity is something scarcely within the ambit of an imperium in decline.

Resolving a Constitutional Crisis

Recently, the United States was in the grip of an anguished constitutional crisis, focusing on the nature and powers of the Presidency in an imperial democracy. In immediate terms the crisis was evoked by the Watergate cabal and the question of President Nixon’s complicity in it. In broader terms it was long overdue—foreshadowed by the confrontation between Franklin Roosevelt and the Supreme Court 40 years ago, when he broke the Court’s resistance to New Deal reform legislation but foundered in Congress on his plan to enlarge the Court with his own appointees.

The thrust of American history in the 20th century since the administration of Theodore Roosevelt, who occupied the White House from 1901 to 1909, has been toward concentrating enough powers in the Presidency to make it an effective instrument for internal reforms and for mastery of foreign crises. Hence, all through this century it has been, in Arthur Schlesinger’s phrase, an “imperial Presidency.”

To speak of this development as “presidential Caesarism” is to invoke again a blurred America-Rome parallel. Compared with heads of parliamentary governments, the American President has quasi-

monarchical powers, especially in foreign policy. But in some ways, as Louis Heren of the *London Times* has argued, it is a feudal monarchy, with the President riding herd on a number of rival baronies—Congress, the courts, the governors, the corporate and trade-union barons, the university elites, the government agencies, the media. The problem is not one of breaking the American Constitution, as Caesar broke the Roman, in order to reign with plenary powers, but one of using the assigned and inherent powers with enough skill to rule effectively.

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History is past politics, and politics present history.

Sir John Robert Seeley
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The men who had these skills—from Washington, Jefferson, Jackson and Lincoln on—constitute, in Emmet Hughes' phrase, the “living Presidency,” using the “living Constitution” to give leadership to a viable civilization. To recall Presidents Wilson, Franklin Roosevelt, Truman, Eisenhower, Kennedy, Johnson, and Nixon in our own century—all formidable Presidents, whatever their faults—is to understand that the presidential office is more vital, not less, than in any comparable period of the American Republic. How far a cry this is from Caesar and Augustus and the emperors who followed them, who came to power because the Roman Republic had developed neither effective crisis leadership nor effective constitutional or popular checks upon it.

The quality of the American Presidency is as much personal as institutional, as much a matter of moral leadership and credibility as of power. It depends on the quality of the Presidents—their ability, their character—which is why psycho-history and the politics of personality have emerged as a new academic discipline. In a time of global turmoil, and in a society as deeply pluralist and fragmented as the American, a merely negative approach to presidential powers would be disastrous to the chances of getting unified action.

For all their recent anguish the American people have succeeded in affirming and strengthening their constitutional structure. There was a four-pronged attack on the Watergate conspiracy: through the investigative press, through the Senate committee of inquiry, through the judicial process, and finally through the impeachment process in the Congress. We shall always have efforts at domination, not only in politics but in every area of our lives. One of the tests of a civilization is whether it can bring even the ugly efforts—which mock all the human decencies and make life itself nasty, brutish and unsafe—under the control of law. Such recent developments as the scrutiny of constitu-

tional safeguards, the search for the nature and limits of power itself, the passage of legislation on war powers and on the financing of campaigns—these are signs of health, not sickness. They attest the truth of Tocqueville's insight—that Americans make blunders but that they have a self-corrective capacity to learn from their experience.

An Erotic Revolution?

Along with debt, welfarism, and the pressure on the outposts of empire, what stands out most vividly in the modern mind when it draws the America-Rome parallel is erotic decadence, as evidence of the dissolution of moral standards and of social institutions. Much of the discussion over current sexual behavior in America takes on an emotional intensity largely from the psycho-sexual overtones that go with the moralizing judgments. There is no disputing the facts about changing behavior, as attested by countless surveys and research in the past quarter-century, from Dr. Alfred Kinsey's first coded interviews in the late 1940's to the current laboratory research of Drs. William H. Masters and Virginia E. Johnson. What is disputable is how deep the "facts" go and what the figures mean.

My own tentative conclusions, after several decades of concern with such studies, are first, that there have been greater shifts in knowledge and attitudes about sexuality than in actual *behavior*, although the latter has been substantial; secondly, that part of these shifts in attitude are the result of social pressures toward conformity—this time not from elders, neighbors and the community but from peer-groups, and directed toward conforming to freer codes rather than toward formal codes; and thirdly, that the carrier groups of change in the 1930's and 1940's were the avant-garde and college-educated, but that in the past quarter century the gap between them and the blue-collar and rural groups has been narrowed.

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History abhors determinism but cannot tolerate chance.

Bernard de Voto
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The earlier revolutions are now reaching across the income and education spans; the changes have become sharper and more pervasive among women than men, perhaps because the double standard is dissolving; premarital and extramarital sexuality are now more widely accepted, although for many there is a "provided-love-is-present" qualification; traditional forms of deviance are regarded with greater tolerance; the "open marriage," communal arrangements, and living together without marriage have gained some ground. To sum up, the

dissociation of sexuality from love, prevalent in all societies and ages, is now taking a different form from the earlier more repressed period. Where once the danger was love without sex, it is now sex without love, but there is far less danger of lives lived without either sex or love.

Sensuality or Freedom?

Does all this bear on the viability of the civilization? I think it does. Civilizations die not only of rigidity, failure to meet challenges, and of constitutional breakdown. They may also die of deep alienations and the erosions of crucial institutions. If America is indeed a sick society, as so often charged, she will show herself in these alienations, erosions, broken connections, and incapacities to relate or be committed to others. The way in which Eros functions in a society may be an important—if not the prime—symbol of the sickness or health of the society.

Historians have sometimes assigned Rome's decay, much as Cato and Juvenal did, to its sexual decadence. One theory has it that sexual cynicism and dissoluteness led to the falling birthrate and the depopulation of the traditional aristocracy and the upper-middle class. But there are historians who put it the other way around—not that the loosening of sexual standards led to the sickness of the society, but that the sexual decadence itself came out of a wider loosening of social ties and breakdown of institutions.

I should myself say that the two processes were linked and fed one another. Moreover, whatever the outward similarities, the inner differences between the functioning of Eros in Rome and in America are more striking. In America, erotic breakthroughs have been part of larger revolutionary movements. The long historical thrust has not been the search for new sensations, although that is part of it, but the search for freedoms. In the 1840's and 1850's, the demands for greater freedom of sexuality in America went along with the struggle for workers' rights ("free labor"), abolitionism ("free soil"), public education (free schools"), women's equality, and for human as against property rights (including socialist and anarchist movements).

Much the same linkage applied in the interwar period of the 1920's and 1930's, and even more strikingly in the 1950's and 1960's, when the erotic revolutions were part of the wider accelerations of willed social change. The two great facets of the movements of the 1960's were a broadly political activism and a broadly erotic cultural ("counter-culture") revolution. Of the two movements, it is the cultural that has proved more lasting. Where the activism of ghetto and campus have sharply decelerated, the "human potential" (or "awareness") movement, the "new naturalism" among the young, and especially the movements for women's identity and equality, continue to flourish.

There is charlatanism as well as excess in all of these movements, and there is an aspect of the current sexuality which makes it at once

too casual and too sexually goal-centered, and thus in both cases desensitized and mechanical. But the other, more sensitive direction is there as well, and—as compared with the Roman case—far more strong. The more meaningful thrust, in the erotic consciousness of America today, as in the historical movements, is toward ways of loving and relating more completely, and of living more completely. Where Roman sexuality got almost wholly dissociated from feeling and love, the pursuit of Eros in America has been part of the pursuit of happiness and the hunger for wholeness and belief. This links Eros with ethos, which is where it belongs.

The greater danger to America's viability has come not from the erotic revolution, but from an erosion of authority—a set of uprootings from the past, a dissolving of ties to family and nation, a breaking of connections. Lately, there have been signs of a return to family, career, religion. But the return seems to be cyclical rather than circular, with a strong infusion of the simplicity, directness and naturalism which marked the changing life-styles and values of the young.

The Comparison with Rome

Thus, the parallels with Rome are superficial. Rome, like America, was a great energy system at the height of its vitality. But where Rome died of an exhaustion of energies, America is more likely to die of the explosiveness of her energies. America came out of a series of great revolutions—the constitutional and social revolutions of England and France. Rome did not. When the Roman founding class and its tradition were fragmented, Rome had little to put in their place, except for the freedmen and the foreign legionnaires. America was from the start settled and peopled from every stock and culture, by strains of migration which formed a tolerable amalgam, and which are now reasserting a healthy sense of ethnic identity. Rome was threatened by the barbarians from without, and eventually succumbed to them. America has been continuously rebarbarized from within by a social mobility which has produced a circulation of elites.

In Rome there were ancestral voices prophesying doom. In America the doomsayers are largely among the intellectual elites, whose passion is to renew the early American dream by social transformations, and who have formed an Establishment of their own to rival that of their ancestors. Rome's constitutional tradition was too easily broken. America's constitutionalism has remained strong against the inevitable concentrations and corruptions of power which contain potential Caesarism.

Rome conquered and annexed vast parts of the known world from a narrow resource and population base in Italy. America started with a large potential continental base, filled it out, and has no need for the combination of occupying armies and imperial administration on which

America: Decline and Fall?

the Roman Empire depended. Rome was debilitated by having no imperial rivals. America has at least four today, in various stages of power growth, with others on the distant horizon.

Finally, when the Romans could no longer believe much in their gods, they turned to strange, mutilating cult-gods in a frenzy of masochism. The American god-search has fused with a values-search, and that, in turn, has been infused with religious overtones, in the sense of straining for the realities beyond appearance and experience. When the original Roman value systems dissolved, there was nothing to take their place. When the traditional American values began to lose meaning, there were challenger values to test their strength and possibly replace a life-denying strain by a life-affirming one.

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History is philosophy teaching by examples.

Dionysius of Halicarnassus

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The 1960's, the most intense decade of social revolution in American history, carried heavy social costs. Yet what the nation gained from the process was more than worth the cost. It gave more people—and especially the blacks—better access to equal chances for an equal life. It gave American women a sharper sense of identity and the feeling that the gap between rhetoric and reality could be narrowed for them as it has been for ethnic minorities. It showed that technology could be used to cure the scars and pollutions it had largely caused, and that the reckless pace of economic and population growth could be leveled out and kept within limits.

There are no inevitabilities, whether of decay or renewal. But if there is renewal it will have to come from awareness, flexibility, a sense of confidence, inner strength, and a common belief in basic values.

When faced by inner challenges, civilizations must not only incorporate what they can of the challenge, but also set inner limits of resistance to what they cannot absorb. This mixture of flexibility and inner limits, of acquiescence and resistance, is one of the toughest life formulae for a people to achieve. It is a good guess that the American people themselves will decide what the outcome of the great social revolutions of the 1960's will be.

THE SOCIAL IMPACT OF THE AMERICAN REVOLUTION

By Robert A. Nisbet



If the American Revolution, of 1776 was a profound social upheaval (and not merely a political war of independence), how can the historian explain the absence of the kind of fanaticism and terror that marked the great European revolutions? Here a scholar who is both sociologist and historian throws fresh light on the social and ideological character of the American Revolution, as well as its impact on the later course of U.S. history.

Robert A. Nisbet was recently appointed to the prestigious Albert Schweitzer chair in the humanities at New York's Columbia University. Previously he taught the history of social thought at the universities of California and Arizona. His books include *Social Change and History* and *The Quest for Community*. His article is excerpted from a lecture

in the Distinguished Lecture Series on the Bicentennial, sponsored by the American Enterprise Institute in anticipation of the 1976 Bicentennial celebration of the American Revolution.

Was there in fact an American Revolution at the end of the 18th century? Was it a true revolution, one involving sudden, decisive, and irreversible changes in social institutions, groups, and traditions? Or was it only a war of liberation from England?

From the very beginning, there has been a sharp division of opinion among participants, observers, and historians. On the one hand, some scholars have agreed with Edmund Burke's judgment in the 1770's and concluded that there was no revolution in the true sense of the word. The so-called Revolution was nothing more than one group of Englishmen fighting on distant shores for traditional English rights against a British government that sought to exploit and tyrannize them. It was merely a war for restitution and liberation. One set of political governors replaced another. Fundamental social institutions were not affected.

At the other extreme is the view, first expressed by the Founding Fathers themselves and espoused in our own century by a number of eminent historians, that an intellectual and social revolution had

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indeed taken place. In the words of John Adams, a revolutionary leader who became the new nation's second President: "The Revolution was in the minds and hearts of people; a change in their religious sentiments, of their duties and obligations."

I suggest that there was a genuine revolution in America, and that we shall find it in the complex of authority, function, bond, and allegiance that we properly think of as the social sphere. Specifically, I refer to property, kinship, religion, and class. This is an area that, following the excellent practice of many French historians of the modern era, I call "intermediate"—intermediate, that is, between the individual and the state.

Every major revolution of modern times has immensely affected this intermediate sphere. Consider the French Revolution, for instance. Whatever their controversies on other aspects, historians are agreed that it irreversibly overturned the social heritage of the Middle Ages. The nature of the traditional family was altered sharply by laws concerning legal majority, divorce, and the inheritance of property. The role of the church was profoundly changed; the aristocracy was obliterated as a legal body; the historic guilds were abolished; all forms of voluntary association were strictly limited. Finally, property was individualized in ownership to a degree unprecedented in France.

Had it not been for these social changes, neither the individualism nor the nationalism that flowed from the French revolution would have been possible. The modern patterns of egoism and collectivism both originated in the drastic changes in the intermediate social sphere that took place in France between 1791 and 1793.

This sphere was, of course, feudal in origin, in keeping with the underlying social structure of France at the outbreak of the Revolution in 1789. Family life was still patriarchal. The customs of primogeniture and entail persisted—the first granting inheritance of land only to the older sons; the second making alienation of property from family impossible. In addition, the aristocracy were a favored class; the guilds were still intact; much of French land was under corporate ownership; and the church wielded tremendous social and political influence.

Feudalism as Ground of Revolution

This point is an important one, because the major revolutions of the modern world have almost invariably taken place against a background of feudal or neo-feudal society. Feudalism invites revolution because it comes very close to consecrating inequality—the prime cause of revolution everywhere. And feudalism succumbs to revolution because it is unable to command popular loyalty. Perhaps even more important, the diffused and decentralized structure of feudal power makes assault on its institutions much easier than assault on any other political and social structure.

Whether revolutions can in fact be mounted successfully on capitalistic-democratic societies, as many Marxists believe, remains to be seen. But the fact is that the revolutions of the past two centuries have all occurred under circumstances closer to feudal than to capitalist or democratic circumstances. (Perhaps Tocqueville was correct in his conclusion that the overriding effect of modernity, of mass society in whatever form, democratic or totalitarian, is to sterilize the revolutionary impulse forever.)

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Historians relate, not so much what is done, as what they would have believed.

Benjamin Franklin
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Let us now return to the problem of the American Revolution. Was there in the American colonies a social order that might reasonably be labeled feudal? Can internal social conflicts be discerned comparable to those that led to the English, French, and Russian revolutions? Finally, were substantial social changes effected politically in conjunction with the war against England?

My answers to these questions are in the affirmative, and I am obliged to dissent from the views of the American Revolutionary War taken by such contemporary scholars as Hannah Arendt, Clinton Rossiter, Daniel J. Boorstin, J.L. Talmon, and Louis Hartz. They have properly noted that little of the passion, the zeal and the doctrinal enthusiasm was present in the American setting that we find in such abundance in Puritan England, Jacobin France, and Bolshevik Russia. These scholars have seen this American experience as political adaptation of a rather sober, pragmatic kind, not revolution in the ordinary sense of the word. Until recently, I shared their view. But the results of recent scholarship oblige me to discern the fundamental elements of a social revolution directed in America, like those in Europe, against a feudal background.

Feudalism in America

Of course, by feudalism in the American colonies we could not possibly be referring to anything analogous to the baronial class, the fiefdoms, and the systems of vassalage that flourished for several centuries in Western Europe. From the point of view of the sociologist and comparative historian, however, the essence of feudalism does not lie in these power relationships. Rather, it is associated with other aspects of political, economic, and social life, viz.:

The Social Impact of the American Revolution

- an absence of centralization of government
- a profusion of intermediate associations of all kinds
- a high degree of localism
- a clearly discernible stratification of rank and power
- a distinct fusion of economic and political power
- an established church
- kinship united with landed property through provisions of primogeniture and entail.

Certainly, the American colonies met all of these criteria, although feudalism in the colonies was certainly not as intense as it was on the European continent. Relationship to land counted for a very great deal. From Maine in the North to Georgia in the South, American colonial life was rooted in the land. There were numerous large estates, some of them vast by European standards, in New York, in the middle Atlantic area, and in the coastal South. The manorial grants in New York embraced more than two and one-half million acres. The Fairfax estate in Virginia had at the height of its prosperity six million acres.

How could there *not* have been a strong admixture of feudalism in the colonies, given estates of this size? Central government was weak, the political tie between individuals was still fused with economic and social bonds, and there was little distinction between property and legal domination in the American colonies as there was in Europe. To be sure, there were indeed small, independent farms in America, especially in New England and the remoter areas of the South. But the center of power lay with the great landowners of New York and Virginia who took leading roles in opposition to England.

From these great manorial estates sprang the class system that was a vivid feature of colonial America. Clearly feudal in essence, it placed the large landowners at the top. There was little rhetoric about their being equal with the rest of the Americans. To be sure, there always was a significant element of equalitarianism in New England—and that is the region we are most likely to have in mind when we speak of the nonfeudal character of prerevolutionary America. But such equality was rare elsewhere in the colonies. Below the great landowning families were the tenant farmers, the indentured servants, and, far from least, the Negro slaves in the South.

Class differences were evident in prerevolutionary cities, as well as in the countryside. Some historians have found more class distinction in urban areas such as Newport, Charles Town, and Boston than in the rural areas. And the city urban aristocracies throughout the colonies knew each other as well as did the rural aristocrats, developing a strong sense of solidarity and in some cases, through marriage, a truly intercolonial influence.

The presence of established religion in a number of American colonies is still another feudal indication in prerevolutionary American life.

Nine of the 13 colonies had something like an established religion, differing from colony to colony. Congregationalism reigned in Massachusetts, New Hampshire, and Connecticut. In six other colonies, the Church of England was the established religion—although the majority of none of these colonies were Anglicans. In Virginia, where the Anglicans claimed no more than half of the population, the other half—including Presbyterians, Baptists, Methodists, and Lutherans—were nevertheless taxed for support of the Anglican church. In Maryland, there were more dissenters than members of the established church.

Finally, we come to primogeniture and entail—quintessential medieval feudal customs. Primogeniture and entail were powerful in Europe, and it was sociologically inevitable that Europeans who had come to the New World would bring these customs relating to family property with them. From the very beginning they took root in the new soil. Pennsylvania, Maryland, New York, New Jersey, Virginia, the Carolinas, and Georgia—all included primogeniture and entail in their laws. By the outbreak of the Revolution, only Pennsylvania and Maryland had abolished primogeniture, and only South Carolina entail. Even in New England, where they had little if any direct effect, there was a custom specifying that when no will was left, the eldest son would receive twice as much of the property as any other heir.

The Movement toward Equality

In short, the feudal union of kinship, solidarity and land was a significant aspect of colonial life. But it was also a source of conflict. For so long as the great estates survived generation after generation, just so long was land, good land, in shorter supply for the lower classes. Popular dislike of the landed aristocracy and its holdings surfaced well before the Revolution—in the 1776 tenant revolt in New York, for example, and in the Regulator movement eight years earlier that denounced unfair taxes levied on the small farmers of North Carolina. Primogeniture and entail would not have been abolished so quickly during and just after the Revolutionary War had not the disproportion in ownership of land been so unpopular.

For equality is the creative force of all revolutions known to us. All modern revolutions have been generated by perceptions of, and broodings about, inequality. Although lacking the kind of intensity given them by the *philosophes* and others in France, issues rooted in perceptions of inequality were growing steadily in the American ideological mind. No doubt can exist that in prerevolutionary colonial America there was popular concern over the medieval institutions we have mentioned: the transmission of property from generation to generation; the influence of property and class in colonial government; and religious rights with respect to religious establishment. What the

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American war of independence did—as war so often does—was to break the cake of custom. It is this breakage that links war with revolution. Thus the confiscation of Tory estates, a war measure, made large areas of land available to small farmers.

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The historian's first duties are sacrilege and the mocking of false gods.

Jules Michelet
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But even more important, measures were taken in the interest of war that affected those unequal social institutions and customs inherited from European feudal society. Thus, within a decade of the signing of the Declaration of Independence, every state but two had abolished entails, and those were two states in which entails were rare. And within 15 years, every state without exception had abolished primogeniture and in some form instituted equality of inheritance.

We may not today regard the abolition of primogeniture and entail as a revolutionary change in the social structure. But to a large and growing number of Americans, the abolition of these customs meant increasing individual opportunities to get ahead in the world. No longer now did family property go to the oldest son alone. Now it would go to all the children, daughters included. Only two states, North Carolina and New Jersey, failed to include daughters at the same level as sons. Elsewhere, full equality was the rule. If this does not astonish, merely look at the number of inequalities between the sexes in law and custom that persists even in our own equality-oriented society 200 years later.

Disestablishment of Religion

There is ample evidence, again, that laws establishing various religions in the different colonies were exceedingly unpopular with minority religious groups that strongly opposed them. Lutherans, Presbyterians, Episcopaleans, Baptists, Catholics, all resented being forced to pay for the upkeep of whatever religion happened to be legally established in the colony where they lived. The outbreak of war and the revolutionary declarations of principle in civil matters generated enormous fervor. True, the laws establishing religions were not everywhere overthrown in a sudden spasm. In New Hampshire, Connecticut, and Massachusetts, we must move well into the 19th century before the Congregational church was finally disestablished. (Where the Episcopal church was established by law, disestablishment seems to have been rather easy, on the whole.) Though, as Bernard Bailyn reminds us, “The disestablishment of religion was neither an original

goal nor completely a product of the Revolution," the previously unplanned, unorganized struggles for religious liberty were "touched by the magic of revolutionary thought and were transformed."

How important religious liberty became during and right after the War is evidenced by the response to the Constitution when it was given to the 13 newly-independent states for ratification. The lack of safeguards for religious freedom at once struck critics of all sections of the country. The Virginia Constitutional Convention proposed an amendment guaranteeing freedom of conscience. North Carolina's convention seconded the proposal. James Madison pointed to the oversight in the first Congress, and the required guarantee was made the first constitutional amendment.

Bearers of the Revolution

We know that the Revolution was in substantial degree carried by youth. As is so often the case in history, the young tended to be more ardent on the side of the Revolution than the old. Not infrequently, families were divided in this respect. Very few of the revolutionary leaders were over 40 years of age. In this respect, the American and French Revolutions have much in common; perhaps some of the relative moderation of the American Revolution resided in the fact that its leaders were not quite so young.

There was some division, though not a perfect one, along property lines. For the most part, the cause of the Revolution was embraced by the common people, rather than by the aristocracy and the large landholders. But it would be a mistake to look for a division in terms of social classes in the colonies as complete as the one Georges Lefebvre was able to find in the French Revolution. Thus, there were plenty of

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The important things in the world are not deliberately brought about; they simply occur.

G.C. Lichtenberg
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tenant farmers who thought (with some justice) that there was greater likelihood of land distribution being made in their favor by a victorious Crown than by the Whig revolutionaries.

On the other hand, the regional diversity of class conflict fascinates the comparative student of the American Revolution. In New England, probably more than half of the most educated, wealthy, and respected element declared for the Tory cause, against the Revolution. But, to the contrary, in most of the South, most especially in Virginia, the same element almost uniformly took the Whig side. It was Virginia

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gentlemen, great planters among them, who formed the local committees to establish public opinion against the British, and made it almost impossible for Tory loyalism to show itself.

There remains the huge class of Negro slaves. The Revolution gave an impetus to the abolitionist movement. Well before the war against England began, there were intellectuals in all parts of the colonies, men of high social place, who had come to hate the slavery system and above all the ugly slave trade across the Atlantic.

At the time the Revolution broke out, there were about half a million slaves in the 13 colonies; most of them in the South, but a fair number elsewhere—some 25,000 in New York, perhaps 55,000 in the whole of the North. The first anti-slavery society in the United States (or anywhere else for that matter) was founded in Philadelphia in 1775, composed mainly of Quakers. Other such societies soon followed. The Continental Congress in 1774 had decreed an agreement not to import slaves, and the prohibition on slave trading seems to have held up throughout the war. Legislatures began to act. In July 1774, Rhode Island passed a law declaring that all slaves brought in thenceforth should be free.

The minds directing the revolution were sensitive as well as deeply reflective ones. The contrast between the presence of nearly 500,000 unfree persons of black skin and the high-flown principles of revolution appealing to natural law and natural rights no more escaped the Jeffersons of America than it escaped the Burkes of England. Granted that the Revolution failed in its immediate aftermath to free most of the slaves—they were soon freed in the northern states—its ideas of freedom and equality proved powerful in the long run and have significantly animated the civil rights revolution of our own day.

The Moderation of the American Revolution

If a social revolution did indeed take place in conjunction with the American war of liberation, why, then, we must ask, did it never achieve the internal ferocity, the almost limitless hatred between antagonist parties, the fanaticism, and, not least, the atmosphere of terror that has so commonly gone with other revolutions in modern history that have involved land, property, social class, and the church? I offer the following as pertinent reasons for the relatively moderate spirit of the American Revolution:

First, the American Revolution was necessarily a dispersed revolution. There was no London, Paris, or Moscow in America—that is, no large, powerful city steeped in the historic traditions of revolt and turbulence. Nor was there in America anything approximating the centralization of rule that existed in 17th century England, 18th century France and 19th century Russia. Moreover, given the background of 13 highly distinct and proudly separate colonies, no Amer-

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ican capital city could possibly have intimidated the states and their governments.

Second, the spirit and structure of voluntary association continued during the Revolution. As European visitors early became aware, the American colonies possessed an inherent buoyancy of mutual aid, of self-help, of desire for functional association—in striking contrast to the European experiences, where political centralization had rendered such voluntary associations weak, their legal contexts precarious. Where mediating voluntary associations flourish, social interest is not readily translated into political crusades and movements.

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The history of the world is but the biography of great men.
Thomas Carlyle
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Third, I account the continuing religious quality of American culture an important factor. The roots of religion in America were and remained strong. While there was dislike of religious establishment, there was never anything approaching the blind hate, the ingrained anticlericalism that the Roman Catholic church incurred in France, the Anglican church in England, and the Russian Orthodox church in that country. In fact, the very continuation of religious spirit among large numbers of Americans provided, from the outset, an important counterpower to the state. We know that in other countries in the modern world the political-social revolution appropriated a great deal of religious energy for itself. Tocqueville was correct in pointing to the strong element of zeal and passion, resembling religious fervor, in the French Revolution. In America, the Revolution never became a god.

Fourth, the lack of ideological militancy in the American revolution can be traced to the absence of an intellectual class in the American colonies in any way comparable to the *philosophes* in France, the Bolsheviks in Russia, or any of the other ideological groups that European history knew so well, starting with the Italian humanists in the 15th century. Revolutionary leaders like Thomas Jefferson, John Dickinson, and Edmund Randolph who prominently figured in the colonies during the 1770's and 1780's, had superbly educated minds; minds moreover actuated by assumptions and ideals of natural rights, including the right to equality. But they were essentially leaders whose lives were rooted in property—land—and whose characters had been shaped by a relatively aristocratic relation to the larger society. They were quite different from the line of revolutionary intellectuals in Europe—individuals characterized by a distinct rootlessness, an alienation from

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society, an over-riding hostility toward traditional structures of authority, and, far from least, by an obsession with power for its own sake. A philosophy of pragmatism asserted itself in America and prevented the kind of abstract, doctrinaire idealism that Burke so mordantly deals with in his *Reflections on the Revolution in France*.

Fifth, there were few of the politically important class divisions that we found in Europe. Although it is true that most wealthy Americans sided with Britain, in one degree or another, and most members of the lower classes favored independence, there were too many exceptions in each instance to give a distinct character of class conflict to the war. Indeed, the loosening of America's structure may have been significantly encouraged by the absence of clear class allegiances in the Revolution. For, with tenant farmers, indentured servants, and even Negroes frequently to be found on the Tory side along with members of the upper class, and with the same kinds of individuals to be found on the patriot side along with well-to-do leaders from New England and the South, only the slightest "class-angling" of the Revolutionary War was possible.

A True Revolution

In conclusion, I would argue that there was indeed an American Revolution in the full sense of the word—a social, moral and institutional revolution that produced major changes in the character of American society—as well as a war of liberation from England that was political in nature. We err, it seems to me, in making the special fanaticism and ideological terror of the French and Russian Revolutions the touchstones of revolution. To deny the status of revolution because of the absence of these qualities is like denying the status of war because of the absence of atrocities.

If the American Revolution were merely a "local" or a "political" affair, we could hardly account for the excitement it created in other parts of the world. Thomas Jefferson's words to John Adams reflect the universalism so many of the revolutionary leaders saw in the event: "The flames kindled on the fourth of July, 1776 [the date of the Declaration of Independence] have spread over too much of the globe to be extinguished by the feeble engines of despotism." Recently, almost two centuries later, historian Richard B. Morris documented "the libertarian currents that the event set off throughout the world." The continuing reverberation of the ideas and ideals of the American War of Independence confirms, it seems to me, its status as a true and historically significant revolution.

HISTORIAN AS PARTICIPANT

By Arthur M. Schlesinger, Jr.

The 20th century has witnessed the revival of an old tradition: the writing of history by those who themselves took part in it. Professor Schlesinger speaks here with the authority of personal experience. He served as special assistant to President John F. Kennedy, and his prize-winning *A Thousand Days* surveys the Kennedy administration from the vantage point of one who participated intimately in many of its debates and decisions. In the following article, abridged from *Daedalus*, he analyzes, with wit and scholarship, the virtues and dangers of history written by eyewitness participants.

Formerly on the history faculty of Harvard University, Arthur M. Schlesinger, Jr. is now professor of humanities at the City University of New York. His books include *The Age of Jackson* (for which he received the Pulitzer Prize), *The Age of Roosevelt* (in three volumes) and, most recently, *The Imperial Presidency*.



After a marked decline in the 19th century, "eyewitness history" has undergone a revival in the later 20th century. This revival has met with a certain skepticism and resistance from professional historians. Yet it may well be related to deeper tendencies within modern society; and, since these tendencies will only intensify in the foreseeable future, we may expect eyewitness history to continue to spread among us for some time to come. For this reason the phenomenon deserves examination.

The term eyewitness history covers historical accounts written by those who directly observed at least some of the events described. Such observation may take place at a high or a low level. Plainly the historian who participates in decisions at the summit will have one kind of knowledge; but it is an error, I think, to suppose that the historian who served, say, as an infantryman in World War Two was not affected by that experience and would not write, as a historian, about the war with insight he might not otherwise have had. Eyewitness history is ob-

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vously a branch of that larger field, contemporary history, by which one means historical accounts written by persons alive in the time in which the events take place.

Eyewitness history must be distinguished from memoirs, which are eyewitness accounts *not* written from the historical viewpoint. Bernal Diaz, Saint-Simon, Boswell, Caulaincourt, Ulysses S. Grant, for example, were all formidable participant-observers or memoirists, but they cannot be said to have perceived events as historians would have perceived them. Memoirs are part of the raw material of history, but they are written to set down one man's experience or to chronicle notable events or to discharge vanities or rancors—rather than to discern causation in the flow of events over time.

There is nothing new, of course, in the idea that historians should write from their own direct experience. Thucydides tells us that he began work on his history of the Peloponnesian war when the Athenians and the Peloponnesians first took up arms against one another in the 5th century B.C. As an Athenian, he was soon swept up in the conflict himself; and it seems unlikely that he would have carried his history as far as he did had it not been for his failure as a commander in the field. The 29-year exile imposed by his native city after the disaster of Amphipolis liberated him to visit battlefields, interview veterans, verify or disprove second-hand tales, and reconcile conflicting testimony.

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The only history worth reading is ... the history of what was done.
and seen, heard out of the mouths of the men who did and saw.

John Ruskin

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When the Renaissance revived traditions of secular history, historians felt free to write about the present as well as the past. Nor was there prejudice against participants. Guiccardini and Machiavelli were eyewitness historians of 16th-century Florence, as was Clarendon of 17th-century England. When historians could not take part in the events they were writing about, they often took part in such events as were available to them and believed that such participation benefited them as historians. Until the later 19th century, most of the great historians—from Bacon and Raleigh to Gibbon, Macaulay, Tocqueville, Guizot, Carlyle, Bagehot, Bancroft, Parkman, and Henry Adams—were all involved in the public world; they were not men just of the study and the lamp.

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The Question of Objectivity

In the late 19th century, however, a new question arose—whether participation in public events might not disqualify the participant from writing about these events as a historian; whether, indeed, experience in the public world might not be incompatible with the ideal of historical objectivity.

Such questions were a direct consequence of the professionalization of history. Professionalization conceived historical research and writing as a self-sufficient, full-time, life-long vocation. As the German historian, Friedrich Meinecke, put it at that time:

We must be aware of the inner difficulties with which a rising historian has to struggle today. At first, he will have to concentrate on studies in a very narrow and isolated area. He is confronted by tasks and problems of a professional character and he must tackle them in a prescribed manner. Editions and specialized documentary studies—usually not chosen by himself but assigned to him or recommended to him—will usually absorb the first decade of his scholarly life. Today scholarship, having become an organized large-scale enterprise, presses most heavily on the individual scholar in the most susceptible years of his development.

Professionalization thus meant rigorous training in the techniques of the craft; it meant specialization, bureaucratization, and a stern insistence on critical methods as the guarantee of objectivity. It also meant a deep pride in the independence and autonomy of the historical guild.

Such severe standards created the image of the historian as a monastic scholar, austere removed from the passing emotions and conflicts of his own day. From this viewpoint, participation in the public world meant the possibility of developing other loyalties—to parties, to institutions, to ideologies. The view arose that not only participant-historians but even historians who wrote about contemporaneous events were too deeply compromised to fulfill the pure historical vocation.

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History is bunk.

Henry Ford

* * *

Those who cannot remember the past are condemned to repeat it.

George Santayana

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As late as the days before World War Two, a professional historian who carried his lectures up to his own time was deemed rash and unhistorical; a professional historian who wrote on contemporary events was considered to have lapsed into journalism; a professional historian who took part in events and wrote about them later was a rarity. Most

scholars still felt that a generation or so was required before current affairs underwent the sea change into history. Today, however, few American universities would hesitate to offer courses which start with World War Two and end with yesterday's newspaper. Only the most ascetic scholars now object to attempts to write serious accounts of the very recent past. And contemporary history has inevitably brought along with it eyewitness history as a vital component.

The Acceptance of Contemporary History

How to account for this unexpected emergence of contemporary history into academic respectability? The fundamental explanation lies, I think, in the acceleration of the rate of social change—an acceleration produced by the cumulative momentum of science and technology. Each decade generates both more innovations and more effective ways of introducing innovations into the social process. This acceleration has meant, among other things, that the “present” becomes the “past” more swiftly than ever before in the history of man. What historians perceive as the “past” is today chronologically much closer than it was when historical change was the function, not of days, but of decades. In the 12th century, the historian's “past” was centuries back; in the 19th century it was a generation or two back. Now it is yesterday.

At the same time, the emergence of a more extensive educated public than the world has ever known has increased the popular demand for knowledge about the problems that torment modern man. History becomes an indispensable means for organizing public experiences in categories conducive to understanding. And the popular appetite for knowledge is further whetted by the development of television, bringing with it new experiences and new stimuli as well as creating the unprecedented situation in which history-in-the-making is now made, or at least observed, in every living room. Moreover, the fear of dehumanization is so pervasive in a high-technology society that it doubtless invites the effort to rehumanize the historical process through eyewitness history.

Along with these developments, there have been novel happenings within the historical field itself. Great manuscript collections, in the United States at least, now tend to be open to scholars sooner than ever before. President Franklin D. Roosevelt, in leaving his papers to the National Archives of the United States and providing for their early accessibility to students, set a salutary example which subsequent Presidents have followed.

Yet the very accessibility of contemporary manuscript collections has had another and somewhat paradoxical effect: It has demonstrated to scholars the inadequacy of documents by themselves as sources for 20th-century history. In the early 19th century, if a public figure had a message to send, paper was the only means, save face-to-face con-

versation, of communication. Moreover, quill pen in hand, he could write only a limited number of letters. Historians studying these good old days can relax fairly comfortably in the archives, confident that the documents will not only be competent sources but will not be too numerous to be read by a single student.

Those days, alas, are gone forever. The revolution in the technology of communications—especially the invention of the typewriter and the telephone—has depreciated the value of the document. While the typewriter has increased the volume of paper, the telephone has reduced its importance. If a contemporary statesman has something of significance to communicate, if speed and secrecy are of the essence, he will confide his message, not to a letter, but to the telephone.

Ironically the rise of contemporary history has itself doubtless contributed to the condition of documentary impoverishment. The growing insistence that papers should, as a matter of right, be immediately opened to scholars may lead to a dilution and distortion of the written record. Public officials, fearing next decade's graduate students, become reluctant to put in writing the real reasons behind some of their actions. Theodore Roosevelt was not the last politician to take the precaution of writing memoranda for the files or letters to friends in order to present his own version of public events or decisions.

This variety of factors helps explain the comeback in this century of the historian who writes out of his own direct experience. Winston Churchill's *The World Crisis* (published between 1923 and 1929) was an early and influential example, followed, of course, by *The Second World War* (published between 1948 and 1954). The two world wars brought professional historians themselves into the public arena, whether as soldiers, diplomats, intelligence analysts, political advisers, or official historians; and many were tempted to apply their craft to the dramatic events unfolding before their eyes.

Does the Historian Need Distance?

Yet the traditional case of the professional historian against contemporary history remained. Truth was seen as the daughter of time: Written history became better the farther away the historian was from the events he was describing. History, in this view, regularly passed from the "heroic" phase—in which contemporary writers portrayed personal goodness and badness as dominant motives and employed melodrama as the dominant tone—into the "technical" phase, when later historians could at last see men as trapped in a structural predicament, with right and wrong on both sides and the dominant tone one of tragedy.

The technical historian, recollecting in tranquility, was presumed to have solider knowledge, clearer perspective, and surer freedom from emotion and prejudice. When historians studied the conflicts of the

past, they should, as Sir Herbert Butterfield put it, give little credence to "the contemporary ways of formulating that conflict." And, of all forms of contemporary history, eyewitness history logically contained more pitfalls than any other, was more vulnerable to interest, bias, illusion, and wishful thinking.

The traditional argument for the inferiority of contemporary history, and especially of eyewitness history, thus rests on alleged deficiencies in both the collection and the interpretation of historical facts.

One may begin examining this argument by inquiring whether the superiority supposedly possessed by the technical historian in the collection of historical facts is all that self-evident. Guiccardini's caution—"Documents are rarely falsified at the start. It is usually done later, as occasion or necessity dictates"—suggests one advantage enjoyed by the eyewitness: the chance of seeing evidence before it is cooked.

The Ability to Evaluate Evidence

Moreover, personal participation in a historical episode may well make the historian more critical of his materials. In writing about the past, the technical historian often is tempted to use letters, diaries, memoranda, and newspapers as if they were reliable forms of evidence. When such evidence is construed under the pressure of direct experience, however, it may become more apparent that A's letters are his own self-serving versions of events, that B's diaries are designed, consciously or not, to dignify the diarist and discredit his opponents, that C's memoranda are written to improve the record, and that the newspapermen recording the transactions had only the dimmest idea what was really going on.

The technical historian is inevitably the prisoner of the testimony that happens to survive. He cannot, like Thucydides, cross-examine witnesses; nor does he expose himself to a public that knows the facts. Tocqueville, in the notes for his unwritten second volume on the French Revolution, discriminates between facts available to technical historians and facts reported by eyewitness historians.

What [contemporary] writers know better than does posterity are the movements of opinion, the popular inclinations of their times, the vibrations of which they can still sense in their minds and hearts... Those close to [events] are better placed to trace the general history, the general causes, the grand movements of events, the spiritual currents which men who are further removed may no longer find.

Tocqueville's point about the grand movements applied equally to people. "It is not true," said Santayana, "that contemporaries misjudge a man. Competent contemporaries judge him... much better than posterity, which is composed of critics no less egotistical, and obliged to rely exclusively on documents easily misinterpreted."

It may further be the case that eyewitness historians often have a more realistic judgment about the operative facts. Practical experience may yield qualities of insight hard to achieve in the library; historians who *know* how laws are passed, decisions made, battles fought are perhaps in a better position to grasp the actuality of historical transactions.

Participation may not only sharpen the historian's judgment; it may also stimulate and amplify what might be called the historian's "re-constructive imagination." To take part in public controversy, to smell the dust and sweat of conflict, to experience the precariousness of decision under pressure may help toward a better understanding of the historical process. Personal immersion in a historical experience leaves the historian no doubt that mass emotions are realities with which he, no less than statesmen, must deal. Far from being gratuitous and needless, as the revisionist historians once tried to tell us, the way people think and feel is an organic part of history.

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History is something that never happened, written by a man who wasn't there.

Anonymous

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If I may cite a personal example, I have no question that, by writing *A Thousand Days* the year after President John F. Kennedy's death, I was able to suggest something about the mood and relationships of the Kennedy years which no future historian could ever get on the basis of the documents—indeed, which I myself could not have reproduced with the fading of memory, the knowledge of consequences, and the introduction of new preoccupations and perspectives—had I tried to write the book ten or 20 years later.

The case against the eyewitness historian in the domain of facts thus seems on examination less compelling than the arguments of the technical historian at first suggest.

Does Time Reveal Truth?

Are the traditional arguments against eyewitness history in the domain of interpretation any more satisfactory? The theory of the stages of historiographical growth assumes the purifying effects of the passage of time, with distance steadily removing distortions of interest and emotion until a final version can be attained, or at least approached.

It is not obvious in practice that time has been, in fact, the father of truth, if by truth we mean the agreement of historians. We know now

that time cannot be counted to winnow out prejudice and commitment and leave the scholar, all passion spent, in tranquil command of the historical reality. The passage of time does not, for example, liberate the historian from his deepest values and prepossessions. "Historians of every period," David Butler has well said, "seem able to acquire equally deep emotions about their subject matter."

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The main thing is to make history, not to write it.

Otto Von Bismarck

* * *
Anybody can make history. Only a great man can write it.

Oscar Wilde
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The major difference on the question of bias is that the bias of the eyewitness historian is infinitely easier to detect and thus to discount. Wherever vital issues are involved, whether the events are as close to us as the war in Vietnam or as remote as the fall of the Roman Empire, distance will not insure convergence. All interesting historical problems may be said to be in permanent contention; that is why they are interesting. One comes to feel that historians agree only when the problems as well as the people are dead.

As long as the problems are still alive, the passage of time only offers new possibilities for distortion. The present, as historians well know, re-creates the past. This is partly because, once we know how things have come out, we tend to rewrite the past in terms of historical inevitability. And it is partly because each new generation in any case projects its own obsessions on the screen of the past. So a religious age interprets political conflicts in religious terms and an economic age interprets religious conflicts in economic terms, and so on. If eyewitness history lacks perspective, so does technical history and in much the same sense.

It may almost be argued that in a sense truth is *only* attainable in contemporary history. For contemporary history means the writing of history under the eye of the only people who can offer contradiction, that is, the witnesses. Once men are dead, the historian can never really know whether his reconstruction bears much relation to what actually happened. To reject the testimony of men and women as to the significance of their own actions and lives, to say that while they *thought* they were acting on such-and-such motives, we, so much wiser, *know* they were acting on quite other motives, is to commit the sin of historical reductionism. The denial that people in the past understood why they were doing things can lead only to the conclusion that we don't know

why we are doing things either; and the difficulty of sustaining this position may well be an important reason for the failure of a great deal of historical revisionism.

After much theorizing about other explanations through the years, American historians today generally agree with those who personally fought the American Civil War that it was more "about" slavery than "about" anything else. If the actors themselves gave lucid and urgent testimony as to why they lived, struggled, and died, is it not a form of intellectual arrogance for historians to come along later and pretend to know better?

Counteracting the Tidy Syndrome

The historian's compulsion is the passion for pattern. Reconstructing events in the quiet of his study, he likes to tidy things up, to find interconnections and unities. If, however, the historian has taken part in great events, he has learned that things rarely happen in a tidy, patterned, rational way. General George Marshall used to say that battlefield decisions were taken under conditions of "chronic obscurity"—that is, under excessive pressure on the basis of incomplete and defective information.

This is probably the character of most critical decisions in the field of public policy. The eyewitness historian tends to preserve the felt texture of events and to recognize the role of such elements as confusion, ignorance, chance, and sheer stupidity. The technical historian, coming along later, often imputes pattern and design to a process which, in its nature, is organic and not mechanical. Historians reject the conspiratorial interpretation of history; but, in a benign way, they sometimes become its unconscious proponents, ascribing to purpose what belongs to accident.

I am not contending that eyewitness history, or contemporary history in general, is "better" than technical history, whatever such a judgment might mean. Obviously we need both, and the dialectic between them is a major part of the historical exercise. I would only suggest that eyewitness history appears to meet significant intellectual and social needs and therefore will be with us for some time to come.

THE COLLAPSE OF STUDENT ACTIVISM

By C. Vann Woodward



"What has become of the 1960's?" asks the author of this article, a noted American historian. It was a period of intense turmoil, particularly among university youth. Strikes, demonstrations, a new life-style, new values, all seemed to usher in a new period in history. But, surprisingly, that intense activism appears now in the mid-1970's to have faded into the background. Here Professor Woodward examines the ingenious and contradictory explanations advanced by intellectuals to account for the remarkable pattern of student behavior in the 1960's.

C. Vann Woodward, professor of history at Yale University, has won considerable acclaim for his work in American history, specializing in the South of the post-Civil War era. Among his best-known works are *Origins of the New South*, *Tom Watson: Agrarian Rebel*, and *The Burden of Southern History*. His article is reprinted by permission of *The New Republic*.

Perhaps it is time for a reassessment of the American youth rebellion of the 1960's. It received a vast amount of attention while it was in progress, but extremely little since the radical phase suddenly ended. Long shelves of books, many of them scholarly and serious, a considerable number by psychiatrists, attest the interest in the subject. But most of them already seem dated. Writing of an ongoing movement, their authors had assumed a durability and future for it that now seems curiously misplaced and distorting. It is unfair to fault them for lacking the hindsight that we enjoy, but the lack is undoubtedly a handicap. Even if we can do little more than supply the perspective they lacked, we might contribute some further understanding.

It is difficult now to realize that as late as June 1970, a Gallup poll showed that a majority of Americans considered "campus unrest" to be "the nation's *main* problem." This is more understandable if we recall some of the events of the foregoing months and years that had forced student dissent upon public attention. In May 1970, following the invasion of Cambodia, student demonstrations occurred in a third

of the 2500 U.S. universities. The tragedy of Kent State University took four lives and that of Jackson State University two more. Later that summer a terrorist bomb destroyed a mathematics building at the University of Wisconsin, killing one and injuring four other people. These events marked the culmination and final round of several years of disturbances. However, from start to finish, the great majority of seven million U.S. college students remained moderate and nonviolent. But the earlier temper of idealistic nonviolence deteriorated rapidly toward the end of the decade as more and more moderates fell under the sway of radicals and extremists.

The growth of disenchantment and alienation among American college students as a whole was indicated by a presidential commission report that "more than three quarters today [i.e., of college students in 1970] believed that 'basic changes in the system' had proved unsuccessful," and a large number accepted disruptive tactics and declined clear repudiation of violent tactics on the part of a small minority.

It is important to remember, however, that the same report took pains to point out that in the spring of 1970 liberal and even conservative opinion still persisted among students in some strength. Only 11 percent of them at that time identified themselves as "radical or far left," while a majority in January 1970 still believed that President Richard M. Nixon was "doing a good job." And even after the Kent State killings, 42 percent felt that "the National Guard [had] acted responsibly in most cases." The fact was that probably the greater part of student political activism was the work of moderates, and its typical form was nonviolent protest demonstrations. In fact, in what the commission report called "the paradox of tactics," it found that "the more violent the extremists became, the more active many non-violent moderates became." After all, it was they rather than the radicals who believed that it was still possible to work effectively for change within the system. So, in speaking of the dramatic shift from the 1960's to the 1970's, we are not concerned merely with an extremist minority but with the moderate majority as well, for both are involved in the withdrawal from activism and the retreat into silence.

Two Types of Rebellion

While they are commonly lumped together as "the Youth Rebellion," "student dissent" or "the now generation," there were really two fairly distinct categories of rebels. There were not only the political rebels but also the cultural rebels, adherents of the so-called counterculture, or one or another variety of countercultures, who manifested their revolt in "lifestyle." Superficial identifications took the form of costume, hair length, mannerisms of speech, the use of drugs, and eccentricities of behavior. Much of this was conformity to a generational subculture.

But stirring beneath for many were profoundly disturbing, if inarticulate, impulses of alienation from the adult world and the prevailing values of American society. Values of the Puritan ethic — work, money, career, marriage, religion, authority and sexual morality — came under attack, along with basic operational ideals of American society — competition, consumerism, materialism, rationalism, technology, and militarism, along with a host of conventional social norms and pieties. Authority in any area and institutional discipline of any

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All history is modern history.

Wallace Stevens
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kind were called into question. In their place was exalted a romantic celebration of the senses and of nature, of the individual and personal relations, of existential experience for its own sake, of the expressive, the creative, and the imaginative. In short, the counterculture had many aspects of a primitive religious movement.

During the 1960's the political rebels and the cultural rebels sometimes made common cause. In some cases they constituted sources of mutual inspiration. They shared some values and goals and had a common opposition in a vaguely defined "establishment." The popular media rarely drew any distinction between the two camps.

Public Concerns vs. Private Values

Only after the collapse of the political activists in 1970 did the distinction between their movement and that of the counterculture become readily visible. For the cultural rebellion continued and for a time even intensified after the political revolt fell into decline. The political radicals, with their concern for power and the manipulation of people as instrumental to abstract purpose, were seen as antithetical to the values of the counterculture. Cultural rebels retreated to privatism and rejected public concerns for private values. Their alienation from dominant national values was indicated by the increasing percentage who were persuaded that ours was a "sick" society; a startling 30 percent of all students in 1971 declared that they would rather live in some other country than in the United States, preferably Australia, Canada or western Europe, in that order.

For all that, in subsequent years there has been a cooling of the cultural as well as the political rebellion. Though it did not take place with as much dramatic suddenness and cannot be so clearly measured, the evidence is reported far and wide in terms of crowded libraries, eager students, higher grades, career-mindedness and multiplying ap-

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plications to medical, law and graduate schools. This is not to say that the counterculture phenomenon is finished and done for, and the generational gap is finally closed. There are too many signs of their continuing presence. But the cooling process nevertheless continues.

What of the efforts made while the movement was still in its heyday to assess its long-term significance and historical meaning? Whether these assessments were positive or negative, friendly or hostile, they shared a tendency to attach momentous historical significance to the movement, to make it, in fact, a major turning point in history.

A Religious Interpretation

One school of interpretation assumed the movement to be basically religious in character and deemed it to be of a historic significance comparable to that of other major religious movements, such as the Great Awakening in the United States in the middle of the 18th century, or the Methodist revival, or even the Protestant Reformation itself. Such movements, it was pointed out, typically originated in periods of spiritual impoverishment and material plenty when chaotic social change coincided with moral confusion. The rebellions were generated in universities or monasteries among students or junior clergy at times of rapid increase in student numbers.

In the 20th century the university as secular church replaced the Mother Church to which students came seeking salvation in the form of self-discovery. Instead they were handed stones in the form of scientific rationalism. They turned to psychedelic experience and esoteric religions as their 16th-century counterparts had turned from scholasticism to mysticism. They attacked the corruption of the professoriate as the Reformation students attacked the venality of the clergy. The subsidies for war research were the modern equivalent of the sale of indulgences. The university secular church, like the medieval Mother Church, was sunk in a "Babylonian captivity" and must be destroyed if it would not be liberated and purified. The university, like the Mother Church, was seen as the microcosm of society, an irredeemably corrupt society. We are aptly reminded that after the historic confrontation at the Diet of Worms, Martin Luther decided not to shave or cut his hair.

Other interpretations have sought more secular analogies in their reading of the historic meaning of the youth movement. Citing Alfred North Whitehead's statement that "great ideas often enter reality in strange guises and with disgusting alliances," another interpreter sums up the meaning of the youth movement in 18 theses which, he believes, "add up to a new world view, a philosophy of life and of nature capable of transforming man's relationship to himself and his society."

Of central importance to this assessment is the place that the movement accorded to community *over* individual values. As Robert A. Nisbet puts it, community "encompasses all forms of relationships

which are characterized by a high degree of personal intimacy, emotional depth, moral commitment, social cohesion, and continuity in time." It is therefore antithetical to competition or conflict, utility or contractual assent, and in many ways to such operational concepts of modern industrial society as individualism, rationalism, science and material progress. Community is conservative, in the literal sense reactionary. Yet community is seen by this reading as lying at the heart of the counterculture. And its youthful adherents picture modern society as suppressing the basic "human" impulses of community as ruthlessly as Victorian society suppressed sexuality.

A Technetronic Society?

Still another line of interpretation embracing several schools of thought seeks to understand the youth revolt as a response to a major economic and social transformation. In this view, we are in the process of being lifted out of an outmoded industrial society into a new society — variously designated as the postindustrial, postmodern, or "technetronic" society of the future. This neo- or anti-utopian society, we are told, will be highly rationalized, highly productive and highly automated. It will require rapid rates of social change, elaborate social planning, more rational administration and a fundamentally technical approach to the solution of human problems — in other words, more human manipulation. Its more optimistic prophets promise greater leisure, more individual choices and sundry idyllic fringe benefits.

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Read this in the histories:
Newsweek or Thucydides.

Daniel G. Hoffman

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The blessings of the postindustrial, technetronic utopia will, of course, come at a price. And the price will be an intensification of the very aspects of contemporary industrial society to which the counterculture most strenuously objects. The price for youth generally will be especially high. For the new society will impose a stern discipline upon the young, requiring more prolonged schooling for new technical skills, postponed gratifications, and deferred adult status. The social harness will tighten on their necks. The universities will replace the banks as headquarters of the new order, serving as knowledge factories.

Those who share this vision of the future — writers like Zbigniew Brzezinski, Lewis Feuer, Bruno Bettelheim and Herman Kahn — regard the youth movement and its counterculture as a counterrevolutionary force. They compare it with the Luddite movement of the

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early 19th century, when displaced agricultural workers tried to smash the factories that displaced them. Dimly conscious of the anachronistic character of their values, their skills, their lifestyle and their obsolete philosophy, present-day youthful dissenters lash out blindly, mindlessly and hysterically at the new order of technology, computers, discipline and social regimentation — all the essentials of the emerging society. Since the social revolution they resist is destined to prevail, “inevitable” in its ultimate triumph, the counterrevolutionary youth rebellion is a “death rattle” of the obsolete, foredoomed by history to failure.

A Revolutionary Interpretation

Precisely the opposite interpretation is advanced by another school, which sees the youth rebellion as revolutionary instead of counter-revolutionary, as the vanguard of the future instead of the death rattle of the past. Writers such as Theodore Roszak, Charles Reich and Philip Slater also view the present as a period of historic cultural, social and economic transition; but the crisis as they see it is caused by the death throes of an obsolete order, not the triumphant birth of a technetronic utopia. They find the youthful opposition to be revolutionary, not counterrevolutionary. It is the young rebels who embody the health, the vision, the purity, the idealism that is essential to the revolution that must come to bring social salvation. Moreover, the revolution is envisioned as largely painless, effortless and non-violent — as well as inevitable.

Turmoil in European Universities

What became of the American 1960's? It may be that the turmoil of that decade is alive and well and living in the heart of European universities today. That certainly is the impression one gained from attendance at a conference of about 100 university professors, mainly from the countries of continental western Europe, that was held in Venice in the fall of 1973, to discuss the plight of universities in the western world. The story that our European colleagues told of conditions in many of the oldest and most famous seats of learning in the world came as a profound shock to most of the American delegates. What they heard sounded like a perpetuation or reenactment of much that the Americans present had lived through four to eight years earlier and of which they still bore scars.

Evident were the same erosion of authority, the assault on standards, the decline of academic freedom, the mockery of scholarly achievement, the ravages of participatory democracy with equal votes for janitors, secretaries and students in academic government; the same politicization of the academy, the polarizations, the radicalizations — all adding up to what has been called “the degradation of the academic dogma.” This is occurring not in marginal countries of doubtful stability, but

in the advanced democracies of northern Europe, in Germany, Holland, Belgium, Denmark, and the Scandinavian countries, as well as in France and Italy. These are, of course, manifestations of the student movement at its worst and most extreme side, untypical of the movement as a whole.

For the American professors at Venice, the European scene evoked some unhappy memories of half-forgotten events at home. But the 1960's already seemed remote and improbable. Especially so when one thought of the contemporary academic scene in America — those peaceful, crowded libraries and earnest, hard-working, achievement-oriented, respectful students one was teaching and had been teaching for several years now. Still long of hair or beard and proletarian or hippie in costume, they nevertheless appear bent once more to the work ethic — whatever they do about other aspects of the Puritan code. Moreover, they appear perfectly content to leave academic government to university presidents and deans, and teaching to the faculty. Even more remarkable, they seem willing to leave the exposure and correction of official misconduct in foreign affairs and moral degeneration of domestic government and society to their elders.

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History—that excited and deceitful old woman!

Guy de Maupassant

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The temptations of complacency and self-congratulation diminish somewhat when we American intellectuals reflect on our own record of analysis, understanding, explanation and interpretation of the historic phenomena of the 1960's. I have tried to suggest some of the wild inconsistencies, contradictions and misreadings of this movement put forward by scholarly writers and by journalists. We have seen how it has been interpreted as both radical and reactionary, both revolutionary and counterrevolutionary. It has been read as an historic turning point of apocalyptic significance, comparable to the Reformation or the Great Awakening; but it has also been dismissed as the self-indulgence of an affluent and undisciplined generation of brats. Its message has been seen as the restoration of human community and the promise of spiritual salvation and mental health, but also as another deplorable manifestation of a “sick” society. There may be truth in all these interpretations, but they do seem a bit difficult to reconcile, one with another. And none of them seems readily reconcilable with subsequent events.

So far I have refrained from exploring theories of the origins of youthful dissent and opposition, hypotheses of causal explanation. I am reluctant to enter a field that has been rather heavily populated by

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psychiatrists, a field in which I claim no competence. However, any effort to assess our attempts to understand the youth rebellion of the 1960's and to explain what has happened to the youth movement in the 1970's will have to take into account a variety of theories about its origins.

Psychological Explanations

By their tendency to hypothesize unconscious or irrational causes as the "real" motives behind revolt, most psychoanalytical explanations appear to deny the validity of youths' own explanation of their motives, and thus to take an unfriendly or even hostile approach. This would seem especially characteristic of the Oedipal rebellion hypotheses. In general these picture the youthful rebel as acting out a psychodrama of familial origin, "displacing" the conflicts of family onto society, and acting out psychic conflicts in external behavior. Some of the Oedipal theorists see the rebel as blindly striking out against the sundry surrogates for a *powerful, authoritarian* father (such as university, government or police); others see him attacking surrogates for a *weak, ineffectual* father; still others see the cause of revolt in insufficient parental responsiveness. Other psychiatrists point to the barrenness, impoverishment and spiritual emptiness of middle-class families as causal origins, while a larger school emphasizes the notorious "permissiveness" of affluent, idealistic and liberal-minded parents — the very opposite of the authoritarian parents so often singled out as villains.

One difficulty with the Oedipal rebellion hypothesis, pointed out by Kenneth Keniston, is that "the Oedipus complex is universal in all normally developing children." It is therefore an explanation that does not explain. For example, it does not explain why the student rebellion suddenly arose and why it suddenly declined, why in some periods rebellions occur and in some they do not, or why more rebels tend to spring from prosperous, middle-class, idealistic families than from working-class, deprived families — assuming always that the Oedipus complex is a constant. Keniston finds that student radicals are "no more neurotic, suicidal, enraged or disturbed than non-radicals."

Opposed to the Oedipal-rebellion theory is the "red-diaper baby" hypothesis, which finds that the typical radical child springs from a politically radical family, and is thus a "chip off the old block." Instead of a generation gap or conflict, there is generational solidarity betokening an easy assimilation of parental values and a smooth, continuous, uninterrupted personality development. In place of patricidal impulses and primal rage, we find here idyllic, pre-Freudian parent-child relationships, with mutual sympathy and understanding support.

But between the Oedipal rebel and the red-diaper baby, a third school sees the archetypical student militant as bursting with ambivalencies, tormented by a schism in the parental image. The father

image this time is sharply split between contradictory parts. One part is seen as an idealistic, honest, highly principled and strong father; but in another mood the rebel son sees the same father as weak, compromising and ineffectual. The young radical is pictured as engaged in a struggle for repudiation of the weak-image father and an identification with the strong-image father.

Bewildered by these contradictory theories, we turn to still another explanation of the generational explosion of the 1960's. This derives from the thought of Erik H. Erikson, the psycho-historian. Erikson sees modern youth as passing through a "psychosocial moratorium," a period between adolescence and adulthood when the young are freed from conventional social or work roles. Those "moratorium years"

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Advice to Persons About to Write History—Don't.

Lord Acton

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offer them golden opportunities to define their identities and perfect their moral senses and ethical capacities. Unencumbered by families or jobs and protected by immunities, the young dare to risk punishment for breaking laws and conventions and defying authorities. In so doing they speak out their moral insights, identify with the oppressed, and seek an inner liberation, an authentic selfhood, a true identity.

But opponents of this theory, as Walter Metzger points out, see the same deferment of adulthood as a prolongation of adolescence, "a debilitating combination of precocious instruction and prolonged dependency," one that joins premature sophistication with a lack of responsibility. This dangerous combination, the analysis claims, tends to induce inclinations toward self-delusion, an ethic of moral absolutes, a blindness to the worth of institutions, and a nihilistic irresponsibility. Once more we are faced with irreconcilable interpretations on the part of the experts, antithetical readings of the same phenomena.

Finally, two other antithetical explanations are paired in partial contradiction. These are more common and less esoteric. One is the "internalistic" explanation, the theory that the real causes of the student rebellion are to be found in the academy itself — more invidiously, in the large "multiversity." The opposing "externalist" theory holds that the true causes are to be sought in the sordid world beyond the walls of the academy, the awful mess made by the older generation with which youth is left to cope.

Obviously there is something to be said for both theories. Within the academy the young are exposed not only to the peer subculture

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of drugs, mysticism and radicalism, but also in their classes and libraries to critical traditions of liberalism, radicalism and avant-gardism. Outside in the "sordid" world rage unjust wars and racial injustice, and the threat of nuclear holocaust hangs over us all. Still, the universities and colleges were not much different in the decades before the student rebellion exploded, and have not changed much since it subsided. As for the externalist explanation, much the same type of student rebellions broke out in other developed countries that were unburdened by a Vietnamese war, grave racial problems or hair-triggered nuclear artillery. Here again are explanations that do not explain — or that leave much still to be explained.

A Record of Professional Failures

The fact is that none of the theories of interpretation or explanation we have explored — scholarly or popular, esoteric or commonplace — has quite measured up to expectations or met the test of hindsight and unanticipated developments. Intended to explain an enduring movement of activism and dissent, these long-range theories are caught short by an unexpected and unexplained silence and cessation. Presumably there were as many permissive or authoritarian parents, as many Oedipus complexes or red-diaper babies, as many strong fathers or ineffectual fathers, and as many "psychosocial moratoriums" after 1970 as there were before. That postindustrial or technetronic revolution still grinds away with the same presumed inevitability, still leaving it unsettled whether the youth rebellion was a death rattle or a birth cry, Luddite or avant garde. At any rate the new Reformation did not reform. The university as secular church went through a few motions of reform. It sells fewer indulgences and takes fewer defense contracts, but the conditions that were presumed to make it a seed bed for rebels are still there and not all that changed. And the still sordid outside world is greeted with silence or apathy by yesterday's activist. Student militants pull down governments and wreck universities abroad, but not in the United States, the land that originated the movement.

There has been a great failure here. And I am not talking now about parents or students, or about society or government. I am speaking of the failure of the intellectuals, the explainers, the thinkers, the writers. It has been a failure to perceive, to understand, to comprehend, and to explain one of the important developments of our time. We have all shared in that failure, for none of us has measured up to the task. The answer to the question, "what became of the 1960's?" seems to be that they have been shelved as an unsolved problem. If we ever get back to it, I hope we will remember this time that it is our own children we are talking about.

FOLK ART AND THE ACADEMY

By Amy Goldin

Folk art is usually regarded with a combination of fondness and condescension, praised for its charm and naiveté but denigrated as essentially inferior to professional, or academic, art. The author questions this view. She argues that folk art, despite its limitations, is a fully achieved style which is often more zestful and enjoyable than much of contemporary professional art.

Amy Goldin is an art critic presently

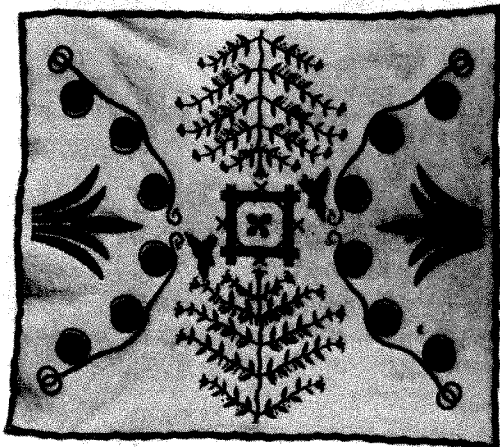
interested in redefining the achievements of the decorative or minor arts. Her article is excerpted from *Art in America*. It was written in response to the 1974 exhibition of American folk art at the Whitney Museum in New York, and the publication by Viking Press, under the museum's sponsorship, of *The Flowering of American Folk Art (1776-1876)* by Jean Lipman and Alice Winchester.

Those who find modern art perverse, senseless or crude can hardly choose an easier means of sliding towards 20th-century artistic attitudes than by developing a taste for American folk art. How delightful, gay and even elegant such work can be! Folk art highlights the arbitrariness of the accepted boundaries between fine art and applied art or craft. It reveals the esthetic triviality of correct academic renderings of anatomy, perspective and *chiaroscuro*, and it demonstrates the compatibility of art and humor. Nowhere is it easier to understand the merging of art and craft than by seeing that such items as the sleek decoys used by American duck hunters are admirable pieces of sculpture. Equally, a weathervane can be as esthetically satisfying as any mobile.

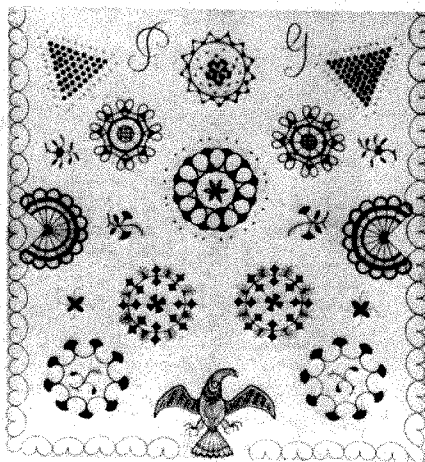
Partisans claim defensively that folk art is artistically equal to the professional product, which they call "academic art." But nowadays, the distinction is an irrelevant one. Professional art in general (rather than just the academic kind) and naive art in general (rather than just folk art) are thought to be the significant alternatives.

But does this antithesis really exist? The suggested tension between an art of the academy (or of the professionals) and one of "the folks" is in fact an invention, whether we talk of the 19th or the 20th century. Moreover, it seems to me unfair and misleading to talk about folk art and academic art as if the academy were the source of all regularity and as if folk art were intrinsically *unbanal*, spontaneous and original. Rather, each is a type of production with identifiable characteristics and with its own strengths and limitations.

Folk art is not simply "the unpretentious art of 'the folks.'" Nor is it true that it is the absence of formal training that allows individual talent to shine through the clear glass of innocence. Whatever else we can



M. Van Voorhis, quilt, 1850, Pennsylvania.



P. Goodall, coverlet, 1790, Buffalo, N.Y.

learn, we can't study to be innocent, and the false naiveté characteristic of so much present-day folksy ornamental painting, from Paris to Belgrade to Bahia, ought to be discouraged. The fact that an artist is nonacademic does not mean that he has no relationship to traditions of style and production.

American folk art, I would argue, constitutes a body of work extended and coherent enough to be called a style. Its subject matter is wide-ranging, though its emotional range is usually limited. Its artistic vitality lies in the area of decoration; its strength lies in color and design. Recent abstract art has sharpened our sensitivities to these matters. And the contemporary downfall of self-denying Puritanism in our culture has sparked an interest in decoration—witness the recent enthusiasm for the flamboyance of Art Nouveau and Art Deco.

Pattern and Design

Many collectors and exhibitors of American folk art mistakenly focus on it as ultimately a manifestation of simple—very simple—humanity (though they refer constantly to color and design). Innocence, charm and documentary values all too often take first place. Concomitantly, whatever is mechanical, repetitious or complexly geometric seems to fall outside their interest.

But repetition is an inescapable ingredient of *pattern*. Whether it's boring or not depends on the creation of a relationship between repeated elements, not on the elements themselves. The symmetry of an appliqué quilt from Pennsylvania is inescapable. But compare the design of an embroidered coverlet from Buffalo, New York: here the staccato motifs shift speed and direction with the masterful abandon of a 12-year old on a 10-speed bike. Since folk art tends to lean heavily on symmetry as an organizing device, this kind of variation of flat design becomes

Folk Art and the Academy

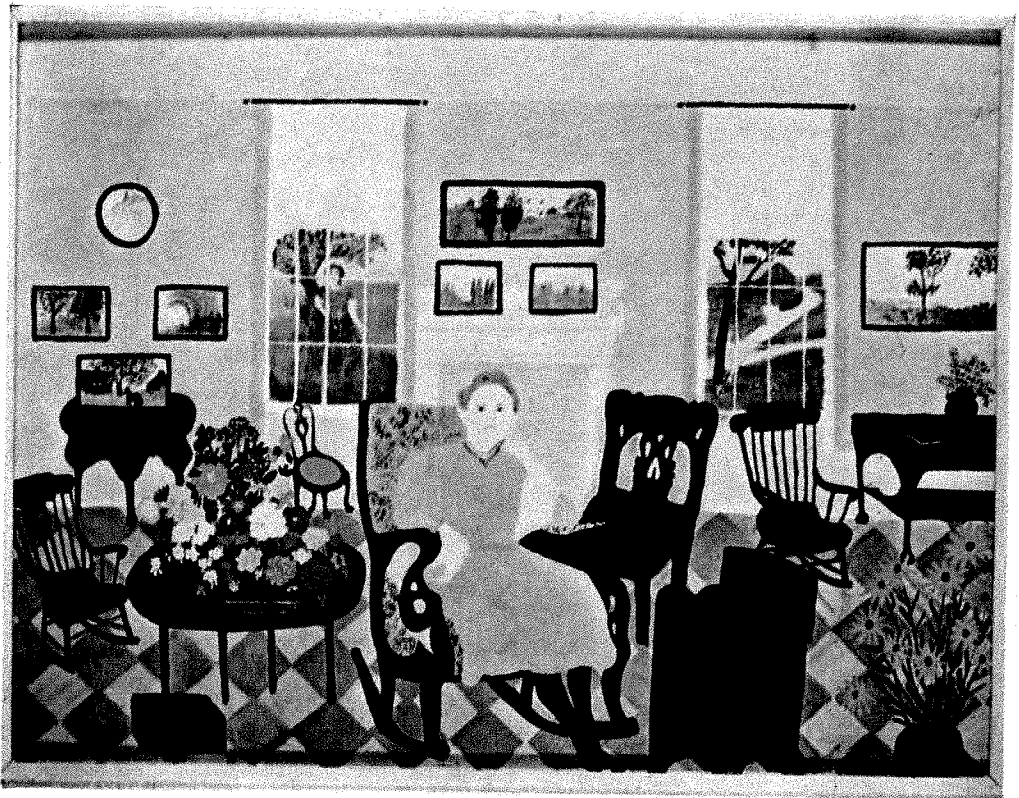
crucial. Here, artistic quality is in no way the fruit of innocence, but is the result of refined discrimination and active visual intelligence.

Nor is it true, as has been argued, that American marine and landscape folk artists had to organize and stabilize their compositions by reliance on design, because they were unable to paint realistically. For design is not simply a device used by folk art to glue an image together to make up for the absence of depth and illusionistic space. Rather, it is created anew with each work, and it is often as central to formal professional art as it is to folk art. Although design was not isolated as a separate topic in academic training, it was not ignored; and such great academic draftsmen as Ingres, Degas and Matisse had a powerful interest in decoration.

Even if we agree that "design" serves the purposes of expression, the idea that folk artists "luckily" hit on expressiveness while vainly striving for description is certainly wrong. Folk art is neither so simple nor so homogeneous. Its artists display a wide range of capacities and aims. Folk portraits, for example, can be literal or ennobling, concerned with psychology or with emblems of class membership, treated as formal documents or intimate mementos.

And folk artists are not always so very lacking in illusionistic skills.

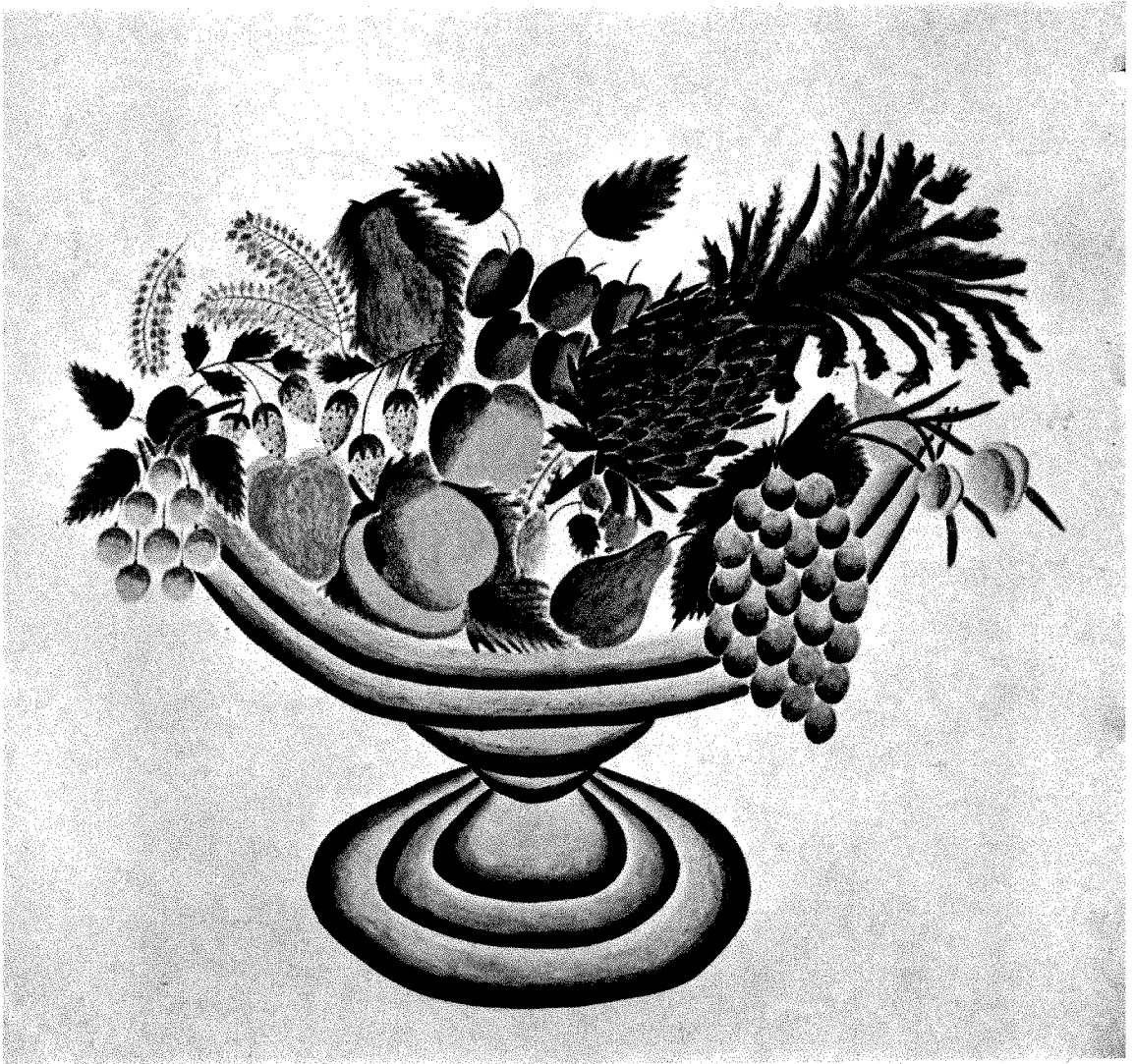
Anna Mary Robertson (Grandma Moses), In the Studio, 1944.



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They can, and often do, make things look solid or distant. On the other hand, many folk artists are often not interested in description at all, but are at pains to fulfill the requirements of a conventional pictorial or sculptural type: a grave-marker, a portrait, a pastoral vision, or, in the case of needlework or penmanship samplers, the display of decorative virtuosity.

If there are so many elements that are intermittently common to folk art and to professional or academic art, how can we account for the palpable differences between them?



"The folk artist could let exuberance carry the work through to the end." (Above) *unknown artist from New York or New England, Fruit in Blue Compote, c. 1840; (right) Ralph Fasanel-la, Family Supper, 1972.*

Folk Art and the Academy

The answer, I believe, lies less in the art than in the process of becoming an artist, which subtly affects everything any artist makes. Bad student work doesn't look like folk art, even weak folk art. Art students characteristically betray a confusion of artistic aims and standards; folk artists never do. Something slightly different marks contemporary amateur work. The sophistication of the accomplished student, who deliberately explores established styles, is quite different from that of the competent amateur. The amateur wanders through the art world like a tourist, picking up whatever attracts him, while the



student investigates zoning laws with an eye to taking up residence.

Today, however, students and amateurs are both inevitably aware of alternative professional models. They work or play in the presence of a cosmopolitan art world. The folk artist, on the other hand, worked in a local situation for a local audience. The cosmopolis was far away. His artistic goals were clear because no "foreign" standards were relevant to him. Unlike the tribal artist, he didn't measure himself against predecessors whose accomplishments were familiar to every-

Andy Warhol, Campbell Soup, 1941. The professional artist also "plays games."



one. There was no "right" way to do the work he undertook nor, in the absence of competitors, was there any need to be innovative. His business was not to make Art but to please.

To consider folk art from the point of view of artistic success or failure, then, is to propose an outsider's judgment. What is banal for us may have looked impressively suave in a small rural community. In fact, for us, folk art seems inauthentic when it looks professional. Its own audience admired it for the conventions fulfilled, while we prize it for its violation of conventions.

The conditions under which folk art was produced discouraged consistency, complexity or a high degree of formal integration. They encouraged the artist to elaborate what he did best and most easily, since that was likely to be where his most vivid satisfaction lay. Composition, traditionally the most intellectual of artistic tasks, was usually handled as simply as possible—hence the frequent symmetrical arrangements. The folk artist's own predilection for solemnity and decorum largely determined his originality. The playful folk inventor who painted a still-life of an egg salad was engaged in games other than those of a professional artist like Andy Warhol who "plays" by painting cans of tomato soup. Warhol was *deliberately* flouting artistic traditions that everyone around him took seriously; but folk artists, like their audience, saw their work as fundamentally private—and thus both unserious and free.

No modern audience needs to be convinced of the advantages of freedom and spontaneity. It is now much harder to see the point of conventions and disciplines. Yet the folk artist's freedom was based on a highly structured situation. He or she worked within the requirements of established forms, specific customers, special occasions; and often under limitations having to do with scarce materials. These external strictures were severe enough to make the discipline of professional rules and traditions unnecessary. Having proved himself or herself at the level of craft, the folk artist could let exuberance carry the work through to the end.

Contemporary professional artists work under the eye of their peers, who measure their accomplishments by the portentous scale of global art history. Their egos are at stake every inch of the way and they work under the heavy burden of contemporary critical appraisal. Who wouldn't wish for decoration as found in folk art to come back again?

SCIENCE, ETHICS AND EQUALITY

By Jacob Bronowski

A noted scientist warns against the current tendency among some intellectuals to reject science and technology in favor of a "false naturalism." He finds in the values of science—among them, dissent, originality, and tolerance—the basis for a truly human ethic. The real problem, he argues, is how to make science and technology serve the growing pressures around the world for social equality. His article is adapted from an address delivered at New York's International House in May 1974.

J. Bronowski, who died recently, was a mathematician, philosopher, and man of letters. At the time of his death, he headed the Council for Biology and Human Affairs at the Salk Institute in California, while continuing as a fellow at Cambridge University. Formerly he served as a scientific adviser and research director for the British government. Most recently, he planned and conducted a television series entitled "The Ascent of Man," an attempt to explain the development of the human species from prehistoric times to the present. His books include *Science and Human Values*, *The Ascent of Man*, and a study of the poet, William Blake.



We intellectuals are in the middle of a grand withdrawal from history. Increasingly we reject or simply disregard the past. But more ominously, we are withdrawing from the future, because it is tied to technology and science, both of which have come under attack as responsible for our present melancholy state of affairs and the even more dismal prospect ahead. It is as if we were trying to close our eyes to all that has made us human, by way of biological and cultural evolution, and want instead to play at being happy foundlings in a hole in time.

The truth is, however, that man's special gifts and achievements are inseparable from his evolutionary history as the only substantially self-made animal. A multitude of animal species run, fly, swim, and burrow around us, shaped by and locked into their environment; but among all the species, only man has achieved enough command to have largely influenced his own biological evolution. In the past, man has moulded himself for the most part unconsciously, by changing the environment so that its selective pressure on him changed. Now we

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are able to command at least our immediate future with a much larger understanding of the implications of what we do; and it would be ironic if those who aspire to be the intellectual *avant garde* chose this new moment to bring history to a standstill.

Man the Changing Animal

It is timely to remind ourselves that history did not begin yesterday, or end then. Man is an evolved being whose evolution is still going on. We are creatures like others in course of change, and we are unlike the others mainly in our rate and range of change. Very recent studies of the protein chemistry of primates suggest that we and the chimpanzee were one stock no longer than ten to twenty million years ago, so that our evolution has gone prodigiously fast (particularly in the growth of our brain in the last million years). By contrast, such social insects as the ants have remained quite unchanged for at least fifty million years, locked in their rigid hierarchies in which function is fixed by structure.

We have to face the logic of life, which is that species reach a steady state, and stop evolving, only when the individuals fall into uniform and indeed identical types. By contrast, evolution goes on if there is a pool of viable mutations, which can express themselves in structures and in behavior different from the normal: so that it is reasonable to prophesy that the more variable the members of a species are, the more freely and unexpectedly will it evolve. If we are opposed to stereotypes and to conformity, if we value variety in human beings, we cannot be squeamish in admitting that, as a consequence, man will go on evolving quite strangely.

Therefore, when in unison with the *avant garde* we say aloud (and rightly) that we need to *safeguard* the environment of life, we must beware of secretly thinking that we must *stabilize* the environment—with the hidden assumption that the fullness of human life is to be equated with man as he is now. Of course, it is unwelcome and unsettling to be told that we are not the peak of nature, a museum piece for eternity; but no doubt Neanderthal man felt the same way before us. The quality of life is not god-given; on the contrary, since the evolutionary rise of man it has been man-made, and it must not be fixed to mean what happens to be agreeable to the kind of men that we are now. It does not make sense to talk of the quality of life unless we have in mind a choice among the possible satisfactions that human life can provide, and particularly a choice among different modes of intellectual satisfaction.

If the basis for our disgust with the commuter city and the power state is the belief that they are unnatural to man (as surely they are), then we need to address ourselves thoughtfully to the question: What is natural to man? Moreover, what is natural to man must be specific to him, which is why the general accounts of animal behavior that derive

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from Konrad Lorenz will not do. Of course man is a poor creature if he blinds himself to the power and the satisfactions of his animal heritage. But he is even poorer, poorer than any animal, if he does not explore those satisfactions which are unique to his species. Hence the scientific search by ethologists for universals in animal behavior is distorted from its purpose, and becomes a silly piece of journalistic sensation, if it is used as a prescription for what is "natural" in human conduct. Magazine readers seem to like to be told that they share a universal beastliness with animals—perhaps because it absolves them of the responsibility to feel human; but that is *not* what has made our species man rather than any other animal.

The Gift of Technology

What has made us men has been deeply documented now by the fossil finds in Africa in the last 50 years, which have traced the biological and cultural specialization of modern man back to its origins, and by the newer work in primate ethology, that is, the study of animal behavior in its natural setting. More than a million, perhaps two million years ago the hominids went on from using rudimentary tools (which the chimpanzee does) to making them and keeping them for future use. That discovery, that simple lunge into technological foresight, released the brake on evolution which the environment imposes on other animals, and sent man off breakneck at a speed unmatched in the 3,000 million years that life has existed on earth. For without that discovery, evolution is necessarily held down to the pace of biological adaptation. But once man *discovered the future*, the environment ceased to set the pace, which instead was set by the capacity to store knowledge and to form plans from it.

This is a remarkable finding, for it implies that the evolution of man has always been culture-driven, and that the driving component was technology. A culture cannot be inherited in the genes, of course; what the hominids passed from one generation to the next was greater dexterity of hand and more farsighted planning in the brain, which became able to manipulate symbols as artifacts. We assume that the choice of mates with these gifts, and the higher reproduction and survival rates of those who possessed them, produced a unique form of natural selection, namely a self-selection for these culturally useful attributes. (The same selection is still at work: to this day, the correlation of intelligence quotients between bride and bridegroom is higher than between parents and children.)

Thus human evolution owes its speed to the gift of technology by which we have shaped the environment; we have never fitted very well into any ecological niche, and instead have carved our own niches with our hands and brain. But even this metaphor is too formal: what has happened is that we have exploited a genetic accident which has made

us able progressively to store and organize experience so that we can profit from almost any terrestrial environment.

High Culture and Advanced Technology

On this scale of history, therefore, to quarrel with technology is to quarrel with the nature of man—just as if we were to quarrel with his upright gait, his symbolic imagination, his faculty for speech, or his unusual sexual posture and appetite. Of course that is no reason why those who choose should not dislike technology. Now that it has helped indirectly to give men a brain two to three times larger than the chimpanzee's, they are surely free to use it to prefer the life or even the brain of the chimpanzee. But they cannot then take as their ground the claim that they want to return to nature, meaning the nature of man. For the nature of man is expressed in the same few universals in every culture, from the prohibition of incest to the mastery of language; and one of these universals is technology.

By the same token, it is a flat denial of history to assert that cultures in which technology has flourished have stifled the development of more personal and sensitive expressions of human nature. On the contrary, the works of high culture that we admire come from the most advanced technological societies of their day: classical Greece, the Arab civilization, the Italian city-states, Elizabethan and Restoration England. The same is true of our great religions: Buddha, Confucius, Christ and Mohammed were not the desert prophets of backward peoples, but grew up in technologically and intellectually advanced civilizations.

What is the Counter Culture Against?

There is a good deal of talk now about a counter culture, and on the face of it what is being countered is only technology as a social culture. That, for example, is what the words say on the pages of Theodore Roszak's book, *The Making of a Counter Culture*: technology is soulless, get rid of it and let your soul breathe out. But what is important is what the words do *not* say. The words do not say anything about the great concepts of science, about the achievements of the rational intellect, or about the imaginative creation in this century of a world picture unbelievably richer and more harmonious than anything you can get from drugs. That was to be expected; the counter culture is against science. What was not expected is the heavy silence about music and painting and literature as lasting and living expressions of all that has made our culture, and has alone made it worthwhile. There is a hardly veiled hatred of everything except private experience: the counter culture is thus also against our great historical tradition of culture.

The assertion (by those who speak for a counter culture) that technology distorts human nature, is not only false, as biology and as

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history. It is a dangerous revival in modern dress of the anti-intellectual, irrational and illiberal prejudices that have been endemic in most advanced societies. In the past this homespun obscurantism has been a defensive faith for the old; now it is being sold to the young as a respectable justification of ignorance without personal effort. But this rejuvenation of anti-intellectualism and anti-scientism simply repeats the traditional truculence of those who have always claimed that know-nothing can do duty for know-better.

A False Naturalism

An armory of old prejudices is being foisted on the young in the disguise of a gospel of nature, which rejects the addition of fluoride to drinking water (despite its proved safety and its reduction of tooth decay), or the use of chemical manure (as if the earlier use of dung was not itself a technology but a magic). The danger in this false naturalism, this anti-rational vision of man, is that it points the young away from the true ills of society to lesser targets. It is wonderful, for example, to see how happily all parties have joined in crying out against smog and oil slicks. Why not? They are indeed dangerous to life—and who is to blame a politician if he does not go out of his way to correct the impression that they are more dangerous than the competitive stockpiling of nuclear weapons? So the instant cliché *pollution* now becomes a symbol for universal abuse which will mask all differences; and we all agree to preserve and hold sacred *the environment*.

Why has pollution become visible and threatening today as it was not 40 years ago? Surely not because technology is less efficient in controlling its own side effects: quite the contrary. If there is smog in Los Angeles and London and Tokyo, and if it is right to feel that as a universal anguish, it is because we now find it natural to concede that one man has as much business to own a motorcar as another. Pollution is not the cost of technology in itself, nor even of the abuse of technology: it is the result of a shift in technology from the privilege of a few to the right of all.

What we have done, and should be proud to admit, is to make the benefits of technology (in the sense of a high standard of health, convenience, privacy and information) as much a human right as life and liberty. In the space of a hundred years we have transformed working and middle class life so that it now commands as a matter of course what used to be the luxuries of upper class privilege—running and hot water, an indoor toilet that flushes, health care and medicines, gas heating and electric light, door-to-door travel, news brought into the house, reading and letter writing, telephone conversation, and all the other norms of daily life that someone born into the working class once could reach only by endless struggles. Of course the proliferation of the apparatus to do these things, the water mains and the sewers, the apart-

ment houses, the roads and the telephone wires, the tin cans and the gift wrappings, for a time has turned the landscape cockeyed. But that distortion is not the price of technology—it is the price of revolution anywhere, at any time.

With the step from privilege to everyday use, technology has become a moral and not a material demand; it is a visible expression of the drive for social justice—just as we now recognize *Das Kapital* as a work of moral rather than material indignation. What seemed self-evident to Marx, namely that the basis of all value is work, is exactly what was not self-evident to his precursors—to whom, on the contrary, it seemed plain that the basic values were land and leisure. And the change came about as a change in the esteem of one man for another—as we see, for example, in the bitter fight in America for the abolition of slavery just at the time Marx was writing. It was a basic ethical division: equality, or privilege. Now the sense that all men are entitled to the same standard has spread to the standard of living, which means (everywhere in the world) the use of new techniques to wrest a modest plenty from the starveling grasp of nature. Technology, then, is no longer a prerogative of status.

Every civilization has been grounded on technology: what makes ours unique is that for the first time we believe that every man is entitled to all its benefits. And that is not just a matter of material needs; it is a deep moral force, like the European Reformation was more than 400 years ago. The analogy is exact because the Reformation was a popular movement of protest to take the interpretation of the scriptures (and their social lessons) out of the hands of privileged groups and put it into the consciousness of every man as an equal. The same claim to an equal share in all human goods, and an equal access to nature and to knowledge, gives its special quality to the technical civilization that we are trying to make. The Reformation that people are asking for today, under a multitude of names, is a fundamental search for a practical ethic of equality.

A Practical Ethic of Equality

I have composed the phrase *a practical ethic of equality* with care: both the word *practical* and the word *ethic* are essential and each has the same status in it. You cannot create equality by practical devices alone—either by benefits or by ballots; they must be powered by an ethic that makes equality native to the dignity of man. And yet the practical devices must not be slighted; they are the conditions for equality, which our century is providing for the first time. Past centuries have shown that without them the ethic of equality is a fine aspiration, but in practice is a sham.

Thinkers since Plato have carried on the search for such a practical ethic by writing about ideal communities: the Reformation writer

Thomas More, for instance, in his *Utopia*. Historically, intellectuals are not other-worldly; they have claimed to be pioneers and leaders of civilizations, what the poet Shelley called "the unacknowledged legislators of the world," because their teaching was directed to make the good life real in society. Notice the word *legislators*: as Shelley used it 150 years ago it was meant to combine precisely the practical man with the utopian. And it is just there that modern states are in danger of breaking in half.

The point at which modern states are cracking is at the hinge between the words *practical* and *ethic*. That is where the aspiration for equality strains and buckles under the agglomerated millions that make up nations now. On one side the governments, the legislators, the mer of affairs are overwhelmed by the headlong daily need to be practical, which turns every query into an ultimatum, every event into a crisis, and every policy into a string of improvisations. And on the other side of the hinge, many intellectuals who prize their integrity have given up the hope of being practical, and with it the claim to be leaders of men. All this is equally true in Washington or in Moscow, in Delhi or Peking, in Jordan or Jerusalem, and whatever the form either of politics or of economics. The weight of numbers now pressing for equality is the universal force that has made governments retreat from their moral obligations and intellectuals from their practical ones.

Yet the public that reads the papers, watches the news, and casts its vote has not been retreating. On the contrary, all through this crowded century the public mind has been growing sharper, more demanding, less receptive to old rhetoric and dogma. While the prophets of gloom groan at every enlargement of communications or the franchise, people everywhere defy them by becoming better informed, more inquisitive, and more critical of the gaps between what they are told and what they see. Of course, as a result, the cruel means and the hypnotic oratory of deception have also been improved in the century; but that is a reaction (or counter Reformation) that every Reformation has to meet.

The Integrity of Science

In the past hundred years, the life sciences and the physical sciences have worked one practical miracle after another in lengthening the life span, in controlling disease (including some mental diseases), in understanding the processes of birth and old age, in moving us about the world, in bringing the world of the imagination to us, above all in revealing (to *everyone* who is willing to learn) that nature has a structure which is as beautiful in its simplicity as in its subtlety. All this the sciences have done in the most practical way without ever swerving from the literal truth. Of course there are scruples among scientists, as among others, about what work they should choose; but there is no doubt about how the work must be done, presented, and debated—with absolute integrity.

Men who purport to be professionals in influencing public opinion have refused to learn that tough lesson. If they are in the practical business of politics and power, they take a short view: the end will justify the means, they hope, before public revulsion catches up with them. And if they are in the intellectual business, they are for the most part convinced that science is only a set of techniques and results. Often they do not like what they think to be the results, and so are not averse to having the counter culture flaunt a distaste for science which they secretly share. As for the techniques, most intellectuals still think of them as a tool-kit of clever but essentially mechanical devices which, by their nature, cannot have any ethical content. It does not occur to them that the basic technique in science is simply telling the literal truth; that science owes its unflagging success to that; and that the public has recognized the lesson.

The Value of Truth

For this is a time when, as I began by saying, many intellectuals have abandoned their own history and have retreated into the counter culture of the shaman, the mystic and the witch doctor. In doing this, they have also abandoned the historical responsibility of the intellectual, which is to be the *active* guardian of the values and the consciences of society. Whether they are scientists or scholars, literary critics or philosophers, intellectuals are not merely the vessels in which traditional knowledge reposes and the vehicles by which it is transported. Intellectuals have these functions because they *prize* knowledge, either as the expression of intellectual truth or as the experience of emotional truth. Without this dedication to truth as a universal end, intellectuals would be only a memory bank; with it, they are the goads and leaders of civilization. It is therefore critical that scientists stand fast to maintain at least their share of the ethical responsibility of intellectuals, namely those values on which the practice of science depends and which its example teaches.

The fact is that the discipline called science is not neutral, because it can only be carried out and made to yield results by obeying a strict code of ethics. The results are neutral, in the sense that they may be put to different uses, but the results are not the science: science is the activity which makes the results possible and *validates* them. The core of the scientific ethic is the value of truth, and I have tried to show in my books (in the first place in *Science and Human Values*) how many other values we derive from this: independence, originality, dissent, tolerance, freedom, justice, honor, and respect. "If these values did not exist," I have written, "then the society of scientists would have to invent them to make the practice of science possible. In societies where these values did not exist, science has had to create them."

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Means and Ends

These are not abstract issues; on the contrary, they are the burning issues across which men in their quest for equality now confront the machinery of state that tries to dominate them. The most inflammatory of them all is indeed the *reason of state*, the issue of expediency: that is, the claim by rulers that their political ends justify the use of any means to reach them. That was the dogma of Adolf Hitler, of course, and characteristically it is the doctrine of the totalitarian states still. Now we have seen the same heresy infect other governments as well.

If that elevation of ends above means is allowed to direct the future, then it is a blueprint for disaster. For the world wars in this century have not come, and will not, from conflicts between the have-not nations and the haves. The world wars were made directly, and in a sense deliberately, by the great states, and that is where they threaten. Now the great states are clustered in political systems that are incompatible. Will the men ruled by the systems become resigned to accept them as sacred ends, and to propagate them by any inhuman means? That is the danger, and it faces us with a series of religious wars as bitter and as barbarous as those of the 17th century. When political and economic dogma become ends in themselves, then inquisition, massacre, and the holy war wait in the shadows.

So it is salutary to say that the ethic of science, like any decent human ethic, wholly rejects the appeal to "higher" ends. Truth and the other values reside not in the end but in the means. Our actions are judged by the honesty of every part of them. It is not true that the end justifies the means; on the contrary, we need to say again and again that only the means can justify the end. The poet William Blake said that:

He who would do good to another, must do it in
Minute Particulars
General Good is the plea of the scoundrel
hypocrite & flatterer:
For Art & Science cannot exist but in minutely
organized Particulars.

The lesson applies to art and science alike. It needs to be practiced visibly by all responsible leaders of thought; and it is noteworthy now how many of these were trained as scientists.



THE NEED FOR ALTERNATIVE TECHNOLOGIES

By Robin Clarke

It has become increasingly evident that existing technologies pose serious problems of pollution, waste, and the exhaustion of natural resources. The solution, argues Dr. Clarke, is not to abandon technology, but to find alternative technologies that avoid the errors and dangers we now recognize. He believes that developing countries have as strong a need for such alternatives as do the developed countries. His article is abridged from *Impact of*

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Formerly editor of the British periodicals, *Discovery* and *Science Journal*, Robin Clarke has recently helped organize a research community in Wales called Biotechnic Research and Development. His books include *The Great Experiment: Science and Technology in the Second United Nations Decade* and *The Science of War and Peace*.

Technology—"Opium of the Intellectuals" was the title of a famous article in the *New York Review of Books* a few years ago. In it, the author argued that we in the industrialized nations had become enslaved and addicted to technology which, by providing material comforts, covered up the deeper and more important social, psychological and political shortcomings of present forms of society. This view of technology, while by no means a majority one in any part of the world, has recently grown in importance, particularly in the industrialized world and especially among the young. It has led to a view that it might in the future be a good idea to do away with technology altogether and return to forms of society in which human and social issues once again become the main concern.

To some extent, I believe this critique of technology to be justified. It seems almost wholly so in those cases where an improved technology is urged on people to cover up more fundamental problems, such as a lack of social justice. Thus the argument that new technology will promote economic growth, so that a country's gross national product (GNP) becomes larger and everyone's slice of the economic cake will get bigger, is often used as an excuse for not cutting that cake in a more equitable manner. At this level technology can indeed be used as a hard drug, which promises nirvana but only at a huge and hidden social cost.

I shall deal here with a different but related problem. The view just outlined implicitly assumes that there is only one form of technology, and that that form is the existing type of technology we see today widely used in the developed countries and increasingly applied in the

developing ones. The argument I wish to advance here is that it is the form of contemporary technology which is primarily at fault, and not the existence of technology itself.

Responses to Pollution

In the developed world, contemporary technology is almost universally regarded as polluting. Though this is by no means the most serious of the criticisms that can be levelled at today's technology, it is by far the most common. And, of course, it is unquestionably correct.

Factories discharge effluents, sometimes noxious and always offensive, into rivers, the sea and the atmosphere. In several parts of the world the eating of shell-fish has become dangerous due to the high levels of heavy metal residue found in them. Nuclear devices, both military and peaceful, liberate unwanted and potentially harmful amounts of radiation into both water and air. Particulate matter—from factory smoke and automobile exhaust—accumulates in the atmosphere, leading to smog. Dangerous chemicals accumulate in foodstuffs. The discharge of waste heat from factories and power plants heats river and lake water to such a degree that eutrophication and subsequent death of aquatic life becomes a familiar problem.

Nor is farm land immune. Agricultural soil is treated as though it were some kind of chemical blotting paper whose only function is to provide domestic plants with sufficient nitrogen, phosphorus and potassium. The soil structure deteriorates mechanically, and the highly complicated ecology of important soil organisms is irreversibly upset. According to one calculation, the United States has lost, since the time the prairies were first put under the plough, one-quarter of the topsoil available.

Such a list of the polluting effects of contemporary technology could be greatly extended. To this indictment there are now a number of standard responses. The first can be described as the "price response." Pollution, this riposte runs, is the price we pay for an advanced technology, but it is of minor importance in comparison to the real benefits technology produces.

The second rejoinder, and this is the one most widely found in scientific and technical circles, is the "fix-it" response. Advocates of this position accept the seriousness of the pollution problem, or of much of it, and claim that serious and concerted action must be taken to restore the environment. This action, however, will involve more technology, not less, and the clever use of sophisticated devices to monitor and then lower pollution levels, if this is found necessary.

The next two possible responses are more radical. The first of them—the "away-with-it" response—argues that the price we pay for advanced technology is far too heavy, and that we have to learn to live either

The Need for Alternative Technologies

without technology at all or at least with a great deal less than is now the case. This response is almost solely confined to the developed countries, and is notably absent in the developing countries, where there may be a very minimum of technology in practice. Generally, it seems, people who are forced to live without technology quickly become unhappy with their situation when they see others benefiting from it.

Fourth, there is the "alternative response." In essence, this claims that the form of technology now in use is intrinsically polluting and no amount of extra technical effort will ever change that situation. This response claims, however, that not *all* technologies are intrinsically polluting, and that new forms of technology can and should be devised to remedy a deteriorating situation. Thus instead of burning fossil or nuclear fuels, with their particulate and thermal pollution, we should develop technologies, such as the use of solar and wind power, which are intrinsically non-polluting. The alternative response needs careful distinction from the "fix-it" answer, which sees nothing *fundamentally* wrong with the form of technology in current use. The alternative response sees current technology as fundamentally flawed, and advocates radical alternatives.

Each of these rejoinders has powerful advocates, and the choice between them is made usually on ethical and emotional grounds, rather than on logical ones. Indeed, it may be impossible to characterize any one as more logical than the other, or even as simply "better." It is largely a question of taste and philosophy, not subject to scientific analysis, and this makes the situation complex and difficult. I should stress, however, that each of these positions demands serious consideration, especially since they have been used to analyze not only the pollution problem but also the economic and political effects of contemporary technology. It is to these other critiques that I now turn.

The Economics of Technology

Probably the most important of these criticisms is economic. The type of technology used in developed countries is *extremely capital-intensive*, so much so that it tends to become the prerogative of the richest countries, and of the richest groups within these countries. What this means is vividly illustrated by a single statistic. In a labor-intensive economy, it takes perhaps the equivalent of six months' salary to buy the equipment needed to provide work for one man. In a capital-intensive, advanced-technology economy, the equivalent figure is 350 months' (or 29 years') salary. It is thus easy to see why development using Western technology has been such a slow process.

However large the figures for international aid from the rich to the poor countries may be, providing jobs in the developing world by using advanced technology is a very, very expensive business. At the same time, that very same technology is not designed to provide jobs as

such; instead, very often it is designed to eliminate jobs, to replace them by automatic processes. It has been said, and with some justification, that our technologies are designed to eliminate the need for people and to maximize the need for capital. It should be noted that this is not a political criticism as such, for the economic problem is no less painful for non-capitalist countries. It is simply that the type of technology we use places great emphasis on the economy of large-scale operations and is often poorly adapted to decentralized, local situations. In this sense, contemporary technology is as badly suited to accelerating development as any that can be imagined.

Using and Misusing Resources

A second criticism relates to the *unfair distribution* of resources. The radical political response to this situation is that if resources were equally split both between and within countries, current forms of technology would be equally accessible to all. But the fact is that neither social nor natural resources are evenly split in this way now; and even if international legislation achieves the Herculean task of improving accessibility to resources, it will not affect the distribution of natural resources within national territories.

The third social criticism most commonly made of contemporary technology concerns its *using up* of natural resources. Essentially, our technology is an exploitative one, wrenching from the earth mineral resources that have taken billions of years to accumulate and using them up within a few centuries. The arguments about how long our resources will last if used in this way are well known. But it is obvious that we have a technology that uses resources such as metal and fossil fuel faster than they are created by natural processes. For this reason, there will come a time when scarcity will be a serious problem.

In this context, as any competent economist will point out, the question of "limits" to growth or consumption is not of central concern. What happens is that as a resource becomes scarcer, poorer quality reserves have to be used increasingly, and their sources become ever more difficult to get at. Long before any resource runs out, then, an economic crisis is precipitated when the cost of obtaining a resource begins to equal the utility of getting it. If we were to continue burning fossil fuel for a few more centuries (at most), we would probably end up spending more energy obtaining the resource than is liberated by burning it. It should be noted that we have long since passed this energy break-even point in the field of agricultural products.

In the developed countries far more calories are used in obtaining a food than are liberated by eating it. This has led the ecologist Howard T. Odum to claim that the potatoes we eat are "made partly from oil," referring to the petroleum products consumed by farm machinery. In a primitive agricultural tribe, by contrast, every calorie of energy used

in farming produces the equivalent of about 15 calories of food.

The fourth criticism made of technology today is that it is capable of widespread *misuse*. The technology of nuclear power, for example, is difficult to distinguish from the technology of nuclear warfare; the latest medical advances are apt to find themselves applied in centers developing biological weapons before they are, in hospitals; and too often the pace and type of technical advances are very closely geared to the profit motive.

Technology and Social Values

Many more criticisms can be made of technology today, but these are more social in nature. Globally, the most important may be the destructive effect of our form of technology on local, developing-world cultures. Built into a technology one can always find the values and ideals of the society that invented it. So when we use contemporary technology in development programs we export a whole system of values, which includes a certain attitude to nature, to society, to work and to efficiency. As yet no developing, local society has been able to withstand the effects of this onslaught, with the result that such a society always changes to meet the incessant demands of the new technology. The end of this process is a global uniformity of cultures, all perfectly adapted to high technology but everywhere the same.

Similarly, modern technology is highly complicated and requires a trained specialist elite to operate it. As a result, ordinary men and women are deprived of the ability they previously had to control their own environment. Moreover the technology used today is based mainly on the virtues of highly centralized services. To be sure, centralization has many advantages, but we should not ignore the disadvantages it brings with it. Technical innovation becomes very expensive; people become totally dependent on the existing system; and the system itself, through centralization, becomes highly liable to both technical accidents and the activities of saboteurs. The last have only to remove a weak link in the chain to cause chaos over many interlinked systems covering hundreds or thousands of square kilometres. Centralization also precludes the use of diffuse energy sources, such as solar and wind power, which by their nature are extremely difficult to centralize.

I will make two further points in criticism of contemporary technology. The first is that technical knowledge today has become a separate part of all knowledge. By this, I mean that technical knowledge does not develop naturally out of local technologies but forms a distinct body of knowledge on its own, with almost no links with what preceded it. For this reason, the idea of craft activity—which of course involves its own technology—has become pitted against the demands of new technology. The question that confronts us almost daily is whether a product can still be something made with skill by craftsmen in limited

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quantity; or whether that product must be mass produced in the latest way by someone requiring only a quick training program. This disadvantage of modern technology must be held responsible for the widespread alienation of workers in industrial society, who are thus reduced to cogs in a machine of meaningless and repetitive manipulations as a means of earning their living.

To summarize: The principal criticisms of modern technology are: high pollution rate; high capital cost; exploitative use of natural resources; capacity for misuse; incompatibility with local cultures; dependence on a technical specialist elite; tendency to centralize; divorce from traditional forms of knowledge; and alienating effect on workers.

Alternative vs. Primitive Technology

An alternative technology that takes these criticisms seriously would not seek to jettison the scientific knowledge acquired over the past three centuries, but instead to put it to use in a novel way. Space heating, in the primitive context, was achieved by an open wood fire. In the alternative context, it might still be achieved by burning timber—provided the over-all rate of use was lower than the rate of natural timber growth in the area concerned—but in a well-designed stove that optimizes useful heat output against the need for fuel. Or it might be provided by a cheap solar heating system, a small electrical generating windmill, or simply by first-class insulation. This difference between primitive and alternative technology is important, for it has in the past led to charges that the alternative is retrogressive, essentially primitive and ignores the utility of modern scientific knowledge. This is not the case.

The most compelling arguments for an alternative technology can probably be made in the field of energy. In the developed world there is much controversy over the future of energy supplies. As our remaining fossil fuels are burnt up, a desperate struggle goes on to make nuclear energy both competitive in price and safe. Neither is easy. Breeder reactors are generally held to be a neat solution to this problem, although the technical problems they pose are still far from solution.

There is the added danger that as such reactors breed plutonium, if they become widespread over the earth's surface, the possibility of plutonium falling into the "wrong" hands is very real. Plutonium is not only a very toxic substance in its own right but it can, of course, be used in an atomic bomb. Estimates of the number of nuclear weapons that can be made—without the need for uranium enrichment plants—from the plutonium that will accumulate over the next two decades from nuclear fission are truly staggering. Add to this the difficulty of disposing of radioactive materials that are the by-products of the fission reaction (a problem still not solved, although the nuclear age is more than 20 years old) and the additional problems of preventing

sabotage and accident in nuclear-power stations, and it is then clear that the path we follow is fraught with danger. The prospect that all these problems will be resolved by the development of safe, controlled nuclear-fusion reactors is still too distant to be realistic.

The Flaw of Thermal Pollution

In any case, all these energy technologies suffer from one fundamental flaw. Because they use up stored energy, they produce large quantities of thermal pollution. There is a real danger that if we continue to use such sources, and our energy demand mounts over the next 100 years as fast as it has in the past 100 years, we will heat up the earth to a point where noticeable and unwanted long-term changes in climate will ensue.

Is there any alternative? The alternative technology recipe for solving world-energy problems runs something like this. First, the developed countries must recognize that there is a ceiling to the amount of energy they can use, and they must become more concerned with saving energy than with supplying it. Second, an intensive effort must be made to use all those energy sources that are supplied to the earth in real time. These include hydroelectric schemes, geothermal energy, tidal power, solar and wind energy, and timber as fuel. The first three of these are limited to particular regions, but this is no reason why they should not be used to the fullest extent. Solar and wind energy are found more universally and, if coupled to the energy which could be obtained by burning timber, they form an interesting distribution pattern over the earth's surface. In almost any habitable place, energy is or could be available from the use of the sun or the wind or timber. In places where there is little sun, wind and wood are often common. And where timber and wind are rare, there is usually plenty of sun.

In the developed world, these sources have been largely neglected because no single one of them is capable of supplying all energy needs. In northern latitudes, for instance, it is difficult or impossible to heat a house sufficiently well with solar energy. But as experiments have recently shown, houses in northern France can be designed to gain two-thirds of their heat from a very simple and cheap installation known as a solar wall. If the remainder can be provided with a little wind power and timber burning, the problem is essentially solved at the level of the household. There is a very real chance that if we accepted multiple solutions to our energy problems, we could solve them by what have been called *biotechnic* means: using energy sources at roughly the same rate as they are naturally generated on the earth, hence creating no problems of thermal pollution whatsoever.

The disposal of sewage is another area where the need for alternatives is compelling. The problems of the current system are classic: expensive sewage installations are needed, together with large volumes of scarce and purified water, to sweep our sewage into processing units, which

then discharge a rich effluent into rivers and seas, causing severe pollution problems. As sewage contains important quantities of organic materials, the land is consequently always in deficit, particularly where animal excreta are not returned to it. (In modern intensive factory farming, this is becoming more and more of a problem.) So sewage disposal causes huge expense, water wastage, agricultural depletion and severe pollution.

Recycling of Sewage

In any rational scheme, we could find ways of returning our sewage to the land where it belongs. To reduce expense, we would do this not with a centralized scheme but at the family or community level. And we would use our precious supply of purified water for more suitable purposes and tasks. In fact, all this is technically quite easy to achieve. In Scandinavia there is a device on the market that will compost family sewage and turn it in about one year into a small quantity of extremely rich but sterile and odorless fertilizer, which can be applied directly to the garden. The device uses no water and can digest kitchen scraps. Why this solution is not more commonly adopted in the developed world is hard to understand.

It is nothing short of tragic, furthermore, to see developing countries investing huge amounts of hard-earned foreign exchange into expensive sewage disposal schemes when this much more efficacious solution is at hand. The irony of the situation is compounded when we realize that in some of the drier developing countries there simply will never be sufficient water available to provide a "Western-type" sewage disposal scheme for everyone. In today's society sewage has become a problem. It should be, and could again become, as indeed it once was, a solution.

How do these examples of alternatives in energy and sewage disposal measure up against existing technologies? Clearly, they do well in terms of pollution, capital cost and use of resources. Equally, they are essentially decentralized techniques, and their principles would be easily understood and controlled by anyone. Further, partly because they are decentralized, they would be difficult to misuse; indeed, a general principle for this constraint is that technical systems designed to operate optimally on the small or medium-small scale are usually difficult wherever that misuse involves a scaling up (as it usually does). Put another way, it is not easy to envisage what a solar bomb or a wind-powered missile would be like.

There is not sufficient space to detail all the other possible alternatives to modern technology. Today a great deal of interest in construction is leading to some novel and satisfactory designs for dwellings made from cheap local materials, with a high degree of insulation, and with almost complete independence from external services. Designs have been made for dwellings that provide their own energy, process their

own proper wastes, and trap and purify their water supply. These designs usually fulfill all the important conditions, although their weak points still tend to be that they are too complicated and costly to count yet as perfect examples of alternative technology. But real progress has been made.

Advances in Food Production

Similar advances are now being tested in the field of food production. For example, one small-scale system in the United States produces high-quality fish protein at a truly enormous equivalent yield in relation to surface used, without relying on external sources other than the sun and human excrement. The fertile overflow from a domestic septic tank is led to a small pond over which a timber and glass structure has been built to capture the sun's energy. In the pond are grown insect larvae in great quantities which feed on the rich nutrient in the pond and thrive in the hot, humid conditions. Once a week these larvae are removed and fed to *Tilapia* fish in another small pond contained in a plastic geodesic dome that acts as a hothouse, heating the water in the pond to the 25°-30° C in which *Tilapia* thrive. In a single summer the fish grow to edible size, and the water is then used to fertilize the vegetable garden. This very ingenious, closed cycle system has much to recommend it; there are without doubt many possible variations applicable in many different parts of the world.

Similarly, much work is being done on the difficult question of protection of domestic crops from predators. Alternative technologists have to find a different solution to that of applying polluting, dangerous and expensive sprays. There are several possible approaches. There is evidence that diverse-species food production can be more productive than that of single species. Ecologically, production of this kind clearly stimulates a healthy species balance, with less danger of the monumental and truly savage attacks made by predators and disease organisms where only one crop is grown.

Alternative techniques such as these will have to be complemented by the biological control of pests and systematic, companion planting programs in which the beneficial effect some species of plants appear to have on other species is used to the full. Cheap and biologically degradable sprays might also be acceptable; both nicotine and garlic sprays have been shown to be effective against a wide range of pests. Alternative technology will have to find sound biological and ecological means of maintaining the altered states of nature which farming implies, in order to replace those blunderbuss spray technologies that our current clumsy approach to things has deemed to be most appropriate.

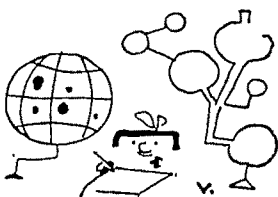
In the past three or four years the idea of alternative technology has blossomed in the developed world, particularly in the United States, the United Kingdom, Sweden and France. But those who urge labor-

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intensive, alternative technologies on developing countries place themselves in an exposed position. Countries without a real technological base tend to see alternatives as second-class options. After all (they contend), why should they accept forms of technology which the developed countries themselves do not normally use? The intermediate technologists have thus become, in many eyes, the "new imperialists" trying to tell the developing world what is good for it.

Yet the situation is more complicated than that. For one thing, considerable interest is to be found in the developing world in what is normally termed village technology or small-scale technology, which can be operated at the village level and used to improve material conditions on a local scale. India, in particular, is a stronghold of such thought; but there are indications from other countries too that they find the idea of value. And if one is discussing the people actually facing development problems in the Third World, they may often be more interested in making a simple pump from local materials than in their governments' far-reaching schemes for a nuclear power program, or a Green Revolution, which usually helps only the larger and richer farmers.

It is true that alternative technologies also have their limitations. They do not function equally well under all conditions. But the important point is that by setting up a series of humane goals for technology to meet, technology is lifted out of the moral vacuum in which it has existed for so long. It can thus, once again, become a moral activity, although like all human activities it will probably always fall short of moral perfection in one or another respect.



International Education: Two Views

1. TRENDS IN HIGHER EDUCATION

By Barbara B. Burn

Especially in the area of structure and governance, writes the author, systems of higher education in different countries can learn a good deal from one another. She outlines some major international developments of the past decade, and suggests what lessons can be drawn from them.

Barbara B. Burn is director of international programs at the University of Massachusetts. At the same time, she serves as a specialist in comparative higher education at the University of California, a staff associate with the Carnegie Commission on Higher Education, and a consultant to the Asia Foundation. She has taught international law and is the author of several studies of higher education.



To attempt to carve lessons from past developments in higher education in different countries is a risky undertaking. A system of higher education is not merely a set of institutions which some young people enter and from which fewer later emerge armed with a sheepskin. As higher education has increasingly become the chief, if not almost exclusive, channel for upward mobility, it increasingly determines who will be a nation's elite and what their social roles are likely to be. It incorporates the values and visions of the society of which it is a part, and it is rooted in a nation's history and priorities. The notion that the systems of higher education of different countries might learn from each other must take this into account.

Even though a country cannot solve its problems by borrowing directly from the experience of others, it can perhaps benefit from seeing them in a wider frame of reference than mere self-examination permits. It is therefore useful to examine the different approaches to common problems in higher education in the 1970's: soaring enrollments and costs; the need to diversify and yet coordinate higher educational institutions; finding the right balance between coordination and institutional autonomy as well as, within institutions, between professorial power and other power; and finally devising a comprehensive and reliable approach to planning and policy-making.

The principal immediate problem is expanding enrollments. On a

worldwide basis enrollments in higher education almost tripled between 1950 and 1965. In the 22 member countries of the Organization for Economic Cooperation and Development (OECD), comprising most of Western Europe, the United States, Canada, and Japan, enrollment went up in the same period from nearly four million to close to ten million, or by 250 percent. By 1980 another 12 million students may be enrolled in higher education in those countries. In India enrollments have increased eightfold since 1950.

A major OECD target in the 1960's was to reduce the inequality of access to higher education among different levels of society. This was not achieved. Youth from upper strata still make up about one-third of all students in higher education in the OECD countries. The proportion of students from the lower and middle social strata failed to go up. Nevertheless, in terms of absolute numbers, this latter group more than doubled. Higher education is thus having to adjust to two pressures: an enormous increase in student numbers and a major increase in students coming from different backgrounds and having different expectations and demands than the students traditionally served by universities.

Current trends toward more flexible admission to higher education and toward comprehensive secondary schooling will add to the demand for learning from lower socio-economic groups in the 1970's and further diversify the student mix. So will the rising enrollment of women in higher education.

Finally, while past and expected enrollment increases in Western Europe and worldwide are dramatic, the average percentage of 20-24-year-olds enrolled in higher education in Western Europe in 1965 was still less than 15 percent. In India it was closer to 3 percent. If higher education institutions ever accommodate the majority of young people—and the United States is the closest to this with over 40 percent enrolled—radical change will be required in order to cope with such “mass higher education.”

Rising Costs

Now as to costs. Spiralling enrollments in higher education have been accompanied by proliferating costs. In nearly every country expenditures have been going up much faster than enrollments. In Great Britain, the increase in recurrent expenditures on the universities from 1950 to 1970 was three times the increase in enrollments. In Canada such expenditures have risen more than twelvefold since 1955. Similar rises have occurred elsewhere. The cost per student has escalated, for example quadrupling for French university students between 1955 and 1965.

Rising costs are prompting measures to retard their rate of increase, and these measures in turn affect the internal functioning and external

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relations of institutions of higher education. The number of students per teaching staff has risen. Staff-student ratios are as high as 1:40 and even 1:60 in some European university faculties or departments. The proportion of junior and part-time teaching staff to total staff has gone up sharply in all the continental European countries. In a shortage period they are more available and less expensive. They are also increasingly demanding a part in decision-making more commensurate with their contribution to teaching.

Economy measures aimed at restricting the demand on higher education resources are altering the composition of student bodies. To maintain some balance between student numbers and available laboratory and other facilities, especially in science courses, the German universities have introduced a system of quotas on admissions. The "closed" faculties of the Swedish universities have comparable entry restrictions. Throughout Western Europe enrollment increases have been most pronounced in the social sciences and humanities. One can speculate that the rapid expansion in these relatively less expensive fields has had its impact on reform in internal governance, as it is the students enrolled in these fields who have spearheaded demands for wider participation in governance.

Economy Measures

Other economy measures may have had an opposite impact. France, Sweden, and Germany have taken steps to shorten the study period required to obtain a first degree and are simplifying requirements for advanced degrees. Everywhere, university systems plagued by high dropout rates are seeking to reduce them and to eliminate so-called "perennial students." These and other measures aim at increasing the productivity of higher education and diminishing pressures on sorely taxed resources. They also leave students less time to press for institutional change.

Rising costs are bringing changes externally as well as internally in higher education. For example, in Great Britain the universities' influence on government decisions with respect to public funding of the universities has diminished. Until a decade ago the universities jointly presented their needs for funds to the government through the University Grants Committee (UGC) and typically got what they requested. In recent years the role of the UGC has become less unilateral. It is more active in telling the universities what in its view (and that of the government) would best respond to national needs. It suggests which universities should teach in fields where limited student demand and expensive resources indicate consolidation. The UGC also has pressed the universities to analyze how teaching staff allocate their time so that the universities can better justify and even improve their utilization of costly teaching resources. In short, the pressure of rising

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costs has gradually transformed the University Grants Committee from an instrument into a two-way medium.

Perhaps the most dramatic new international development in higher education, aimed at least in part at reducing costs, is the establishment or expansion of nonuniversity higher education: the University Institutes of Technology in France; the polytechnics in Great Britain; the community colleges and the College of Applied Arts and Technology in Canada; the Engineer Schools in the Federal Republic of Germany; the Colleges of Advanced Education in Australia; and higher technical schools in Japan. The establishment of university branches or affiliated universities by four universities in Sweden appears to be part of the same pattern.

These new kinds of higher education institutions date with few exceptions from the 1960's. Their costs per student are, or are alleged to be, less than the universities'. They tend to have less stringent admissions requirements than the universities and therefore provide more democratic access. These new and growing institutions claim to offer programs geared more to the application than discovery of knowledge and to be more oriented toward the student with practical aptitudes—the future technician and junior executive. It is consequently alleged that these new institutions are more responsive to meeting national demands for trained manpower.

Problems of Coordination

If soaring enrollments and costs are critical problems common to virtually all systems of higher education today, coordination may be a yet more difficult problem. A look at the new polytechnics in Great Britain illustrates the complexities.

The polytechnics offer professionally oriented programs of university and subuniversity level to part-time and full-time students and focus on teaching rather than research. Their admissions requirements are less rigorous than the universities'. The "poly's" are financed by local governments. However, as more than half of the funds available to the local authorities come from the national government, the polytechnics' level of funding is determined nationally, at least indirectly, as well as locally. They are said to be different from, not inferior to the universities, although their less rigorous admissions policies and lower levels for faculty salaries, library materials, and student facilities make this open to question.

National policy in Great Britain since the early 1960's has supported the principle that higher education should be available to all who are qualified and wish to attempt it. Carrying out the policy requires decisions on how much and how quickly the three different sectors in British higher education will grow: the universities; the colleges of

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education which train teachers; and the polytechnics and other post-secondary institutions falling in the so-called "further education" sector.

The universities can decide how they will use their resources and what their functions are within the limits of funds allotted for five-year periods by the national government and of the recommendations on academic programs, enrollments, and unit costs set forth by the University Grants Committees. In principle they are autonomous. The polytechnics and colleges of education must work within different constraints. The national government sets policy on their functions within the entire system. However, their resources are fixed through negotiation with the local authorities to whom they are in the first instance answerable, and in these negotiations some institutions fare better than others. The expectation that polytechnics and colleges of education will respond to national policy on their role, when decisions are made locally on their funding and functions, results in a peculiar institutional schizophrenia, not to say confusion.

The universities are coordinated not only through the UGC but also through their own increasingly vigorous efforts to present a united front to the government and UGC through the Committee of Vice-Chancellors and Principals. This body has become more active in the last few years in formulating and pressing the universities' interests, although inter-university competition is far from dead. Institutions of advanced further education, including the polytechnics and the colleges of education, are less organized to identify and press for their shared interests vis-a-vis the national government.

This review of the situation in Great Britain suggests some of the problems involved in expanding higher education in an interrelated but only partly coordinated system. In education there are no islands. Decisions in one sector and at one level have repercussions at the others. Policy-making at the national level must somehow mesh the national interests in response to local or regional interests. In such decision-making a balance must be struck among the needs for coordination of all higher education, diversity among institutions to meet national, local, and educational interests, autonomy at the institutional level, and equality among different kinds of institutions.

Autonomy and Governance

The growing external coordination of higher education has effects on the internal structure of institutions. Accompanying the trend toward more national or regional coordination is a more recent and on the surface, contradictory, move in the continental European countries to decentralize decision-making within higher education systems. Individual institutions are acquiring a larger voice in their own affairs. Complementing this are widespread reforms to broaden and democratize decision-making bodies within the institutions and to in-

introduce into their day-to-day operations the tools of managerial efficiency.

In France, autonomy and participation are basic to the reforms launched by the 1968 Orientation of Higher Education Act. In their teaching and research programs, in finance, and in internal administration, the universities now theoretically enjoy considerable autonomy, although traditions of dominance by the central ministry may be hard to shed. Greater institutional autonomy is a basic aim of reforms in Spain, Italy, and Germany. This devolution of authority to educational institutions parallels a trend toward strengthening government at the regional level, thus modifying the extreme centralization long typical of these countries.

Without major change in the role of professors, more institutional autonomy would be an anachronism in higher education systems where, as in France, Italy, Spain, and Germany, the full professor has traditionally reigned virtually unrestrained in internal matters. It is not surprising that the oligarchy of the professors has been a leading target for student revolt. The French universities now have a quadripartite representation of professors, students, administrative personnel, and outside interests. Proposed reforms in Italy, while keeping a dominant role for the professors, would give representation to other interests including the students. Student representation in university bodies has existed since the early 1950's in Sweden; current experiments with participation of students, faculty, and other university staff at the department level are expected to lead to a yet more substantial student role in the future.

New Directions

Authority structures in the German universities are yielding to the demand of junior and middle-level teaching staff for a say in what goes on (after all they now do most of the teaching), and at some of the universities, notably Frankfurt, Marburg, and the Free University of Berlin, students now share actively in governance. In Great Britain students have accumulated places on university committees, senates, and councils, and enjoy a greater role in governing other higher education institutions as well, especially the polytechnics. In Canada student participation—and that of faculty—in university decision-making has widely increased in the last several years.

Everywhere student power is pressing for and winning at least some voice in higher education affairs, often aided and abetted by the parallel demands of the growing ranks of junior teaching staff. However, almost everywhere students are still excluded from decision-making in matters of finance and staff appointments, the last bastion of professorial power.

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The multiplicity of interests brought to bear on higher education, as it has become more expensive and devours an enlarging share in the national product, and the greater size and complexity of individual institutions require more managerial efficiency in higher education administration. The last few years have brought changes here also. Administrators have longer tenure: deans at the "new" universities in Great Britain, the vice-chancellor at Oxford, rectors at the German universities, the new presidents of French universities. Central administrations, woefully understaffed in many systems in relation to the demands on them, are expanding: in Canada, Great Britain, the Federal Republic of Germany, and elsewhere. Executive and policy-making organs which university expansion has rendered unwieldy are being streamlined or replaced by smaller bodies that have more authority to determine policy and supervise its implementation.

The imperatives of expansion in higher education require more reliable planning and more reliance by the policy-makers on the planners. They also call for answers to such questions as whether expansion in future higher education will be determined by the market situation or by analyses of national need or a combination of both, and how these will be forecast and fed into the policy decisions made. Study of such questions is now gathering momentum. However, in general, planning remains peripheral and inadequate at a time when firm and informed decisions are required.

Some Lessons

What can be learned from the developments touched upon in this review? I suggest the following hypotheses.

- The traditional function of higher education—to train the elite for university teaching and research and for the professions—has become obsolete. Today higher education should be available to all qualified young people regardless of background, and to other age groups as well, offering the opportunity for professional mobility, enlarged personal satisfaction, and the knowledge and skills needed to function in an increasingly complex environment.

- Higher education should also provide much of the training and new knowledge that contemporary society requires and should be responsive to changing demands.

- As the expansion of enrollments in higher education does not necessarily increase the proportion of students coming from the middle and lower levels of society, positive steps must be taken to increase this proportion.

- The enlargement of higher education's mandate and the increasing heterogeneity of the student population demand diversity within higher education: diversity in programs, approaches, resources, and aims, and room to experiment.

- Elitist traditions continue to give first place to the universities, tempting nonuniversity institutions to poach on university resources and to pirate their aims, thereby eroding distinctions between university and nonuniversity higher education. Stubborn as this pattern may be, diversity and equality must be reconciled if a differentiated system enrolling students with varying aptitudes and aspirations is not to relegate some institutions and their students to an inferior status.

- An egalitarian network, not a hierarchical structure, of different kinds of institutions may be one way to realize this reconciliation. Another is through a system of comprehensive institutions having equal status and sharing similar functions. Such a network should permit student mobility within the system.

- Piecemeal attention to the parts of an educational system does not work; the parts are interrelated. Consequently, measures designed to affect one part of a system must take into account their potential impact on the whole.

- Reconciling diversity and equality puts a strain on education strategy; striking a balance between the need for diversity and the need for overall coordination may be even more difficult. If different bodies make decisions affecting separate sectors of higher education, who coordinates the coordinators? The best guarantee of diversity lies in a system combining a substantial degree of institutional autonomy with mechanisms to permit local and regional interests to influence policy.

- Institutional autonomy must allow wider participation of various interests in the governance of institutions than was permitted by traditional patterns. The trend to include in university governance representatives of the students, junior teaching staff, lay interest groups and even professors where they were previously excluded from central governing bodies, as in Canada, is a necessary one. It permits a balance between broad participation and professorial prerogative more keeping with the growing diversity of aims and interests that higher education must now serve.

- Despite the differences in higher education structures, aims, and problems in different countries, they can in fact learn from each other. As problems of rising enrollments and costs and of devising appropriate structures to coordinate growth and decision-making become increasingly severe and typical—more in the developed countries but also in the developing—no higher education system can afford not to examine and profit from the experience of other systems facing comparable challenges.

International Education: Two Views

2. A WORLDWIDE STUDY OF SCHOOLS

By Grace and Fred Hechinger

One of the most ambitious studies of international education was conducted recently by a group of researchers representing 22 countries in Asia, Europe, and North and South America. The authors find that its greatest interest lies not in any competitive comparisons, but in the policy directions that are suggested by its massive collection of data.

For many years the education editor of *The New York Times*, Fred M. Hechinger is now a member of its editorial board. He has won a number of awards for his articles and editorials on education. His books include *An Adventure in Education*, *The Big Red Schoolhouse*, and *New Approaches*. Grace Hechinger has collaborated with her husband on a number of books, among them *Teen-age Tyranny* and *Pre-School Education Today*. Their article is reprinted from the January-February 1974 issue of *American Education*.



Grace Hechinger

Fred Hechinger



All attempts to compare educational achievements are fraught with danger. What seems like success in one community may leave judges elsewhere, under different conditions, entirely unimpressed. Expectations and standards are culture-bound. And so, it is an act of considerable courage when academic researchers try to assess and compare the educational achievements, not of the schools of one city to those of schools in another city, but between literally thousands of children, teachers, and schools in 22 nations.

Yet, that is precisely what the International Association for the Evaluation of Educational Achievement (IEA) has attempted. Based in Stockholm and financed by foundations and government agencies, this research group has surveyed educational achievement in science, literature, and reading comprehension. The nations taking part in the studies were Australia, Belgium, Chile, England, Finland, France, West Germany, Hungary, India, Iran, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Poland, Romania, Scotland, Sweden, Thailand, and the United States.

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Masses of data were collected in this, the biggest international education survey ever attempted. Some 258,000 students and 5 teachers in 9,700 schools participated—taking or administering, answering questions in interviews, or filling out questionnaires. Millions of items of information have been collected, some of which will be included in volumes to be published on each of the subject areas. Libraries in Chicago, Melbourne, New York, Stockholm, Tokyo, and at Stanford University in California will store all the information for future use by researchers and scholars all over the world.

While the experts are still sorting out the facts and debating possible conclusions, the temptation is to ask: "Who's ahead? Is it true Johnny can't read, and is Hans reading any better? And what about the charges made by American sociologists that school really doesn't matter or doesn't work?"

Torsten Husen, the chairman of the IEA and a professor of education at the University of Stockholm, was well aware that the horse-race aspects of the study would most intrigue the press and the public. He recalls what he considers "the fiasco of 1964," when the IEA disclosed the findings of its first international survey—one relating to achievement in mathematics. The only part of the report to get any attention was that which showed that Japan was ahead of everybody.

Professor Husen considers this a simple-minded approach to complex problems. It ignores differences in the national, cultural, and social environments and priorities. It brushes aside such questions as: What proportion of the children actually go to school? What is expected of pupils in other areas of study? And what are the yardsticks of achievement in different countries?

"Our intention," says Professor Husen, "has been to avoid any kind of intellectual Olympics." The aim was rather to find answers that might be useful in reviewing, charting, or changing educational policies.

A Test of Mass Education

For many countries, any international comparison of educational achievement raises the enormously important question of whether the basic philosophy and the guiding principles of mass education will work—not just in theory, but in comparison with other nations. For example, universal education in America has long been an article of faith. To generations of immigrants, the promise of the land of limited opportunity was virtually synonymous with free access to schools. There was no sorting out at age 10 or 11—as in Britain, Germany, and many other countries—of those who would or would not pursue an academically-oriented course which, in turn, determined a child's future life and career. Education, universal and egalitarian, was, in Horace Mann's optimistic 19th century forecast, the cornerstone of a free, open, prosperous society.

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Dream or reality? Conservative critics of American education have never fully accepted this egalitarian approach. They warned that this undifferentiated access to the public schools for all comers penalizes the gifted by lowering the level of achievement to a mediocre common denominator. They felt, as did European conservatives facing proposals for expanded educational opportunities, that more means worse.

When the high financial cost of educating everybody is considered in addition to such philosophical and ideological doubts, the question of how well the United States compares with other nations assumes an importance quite different from that of intellectual Olympics.

One of the study's crucial findings therefore is that, in reading comprehension, the top nine or ten percent of the American high school seniors performed better than similar elite groups of the other nations. This is clearly significant, particularly when it is viewed against the fact that many of the other countries in the sample remain highly selective—or restrictive. In other words, the cream of talent in the United States does as well as or better than the ablest students in educationally less egalitarian or more elitist countries.

Penalties and Advantages

"It is actually the selective system that pays a price in lost talent and social dislocation," says Professor Husen. To prove his point, he showed that in West Germany, which screens out "non-academic" children roughly at age 10, the top-achieving group among high school seniors also showed the "highest index of social bias." This means that these most successful students came almost exclusively from the privileged classes. At age 18, only one percent of children from lowerclass (unskilled or semi-skilled workers') homes were found in German schools, compared with 14 percent in American schools.

In science, however, the American top group of high school seniors finished in only seventh place. The reason may well be that, compared with many European counterparts, American schools are quite lax in the amount of science required of their students. It is a laxity that has been criticized most persuasively by the U.S. educator and former president of Harvard University, James B. Conant, who tried in his high school reform proposals to stiffen the science requirements for the upper 15 percent of gifted students.

The important and undeniable conclusion to be drawn from the IEA study is that mass education, while in no way hurting the academic achievement of the most talented young people, assures a constant infusion of new blood into the academic elite. This is crucial to any effort to keep society fluid and to allow rich and poor, workers' and professional people's children to rise to the top.

Such an open society does, of course, pay a price in terms of the total standing in any international competition. For example, in an assess-

ment of the entire senior class, rather than just the top nine percent, the United States dropped from top rank to only 12th place. Since the United States graduates by far the highest proportion—75 percent of its school-age youths—from high school, it is not surprising that it scored 12th in a comparison with nations which, at that level, have already eliminated large numbers—in some instances, the majority—from their academic schools, and thus from the competition. However, these American youngsters, by remaining in school, not only help their own future careers but give to their country a much better pool of educated manpower.

School and Success

Closely related to the IEA's findings is an issue that is currently arousing intense debate and controversy in the United States and abroad—the relationship between schooling and subsequent success and status in society. For example, the Stockholm report appears to challenge the widely publicized theories of the Harvard research team headed by Christopher Jencks which holds that schools have failed to reduce social and economic inequality.

The IEA survey admittedly did not concern itself directly with children's future income; but by clearly showing that open access to schooling allows children from poor and disadvantaged homes to rise to the level of the academic elite, it offers persuasive evidence that education does open the doors to economic success as well.

At the same time, the IEA survey appears to confirm the claim—first published by James Coleman of Johns Hopkins University in 1966—that in the total pattern of achievement, home background is more important than anything the schools have so far been able to contribute. But Professor Husen nevertheless stresses that the schools do make a substantial difference and that there is a direct correlation between concentrated study and success. Or, as one of the Stockholm researchers puts it: "Get them and stretch them"—access to school and hard work is the winning combination.

Here, an item of some slight mystery enters the findings. An analysis of the schools' greater success in teaching science—which the Stockholm researchers call a "school-oriented" subject—than in teaching "home-oriented" reading raises questions about the educators' capacity to adapt their teaching methods and attitudes to children's needs. "The schools," says the report, "appear to do little to mobilize their resources for the improvement of reading beyond the early years."

The very fact that there is a clearly defined difference in the schools' success with "home-oriented" subjects—that is, those in which Coleman's theory is found to hold to a remarkable degree—and those "school-oriented" areas in which most of the work is being done by teachers, with the home making only a minimal contribution, suggests

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that educators could do a better all-around job if they reordered their own priorities. Or, to put it differently, the "mysteries" that make children learn science, mathematics, and other school-oriented subjects with relatively more success than they learn home-oriented subjects could undoubtedly be more effectively identified and applied to the latter subjects as well.

That this is more than a wishful hypothesis is suggested by another IEA finding—confirmation of the charge made by the women's liberation movement that girls are being traditionally and chronically short-changed by the schools. Thus, the study found that, virtually without exception (and those exceptions were found to occur only in a few highly specialized schools), girls lag behind boys in interest and performance in science. The clue to the reason for that discrepancy is the discovery that the gap grows wider the longer girls attend all-girl schools, where the teachers clearly act on the assumption that girls ought not to be bothered with such boy-oriented subjects. When girls attend coeducational schools, the study found, the gap narrows significantly.

It therefore seems evident that, whether the accepted doctrine is one of the "home-oriented" or the "boy-oriented" subject, the cause for low achievement is in large part to be sought in the schools'—and society's—lack of determination to overcome learning problems.

Attitudes toward School

The IEA research ventured on the most slippery ground when it tried to get a reading not only of students' achievements but also of their attitudes. Such efforts, whether by way of questionnaire or interview, tend to be devalued by the fact that teachers and pupils everywhere usually know how to outguess their questioners, and to come up with the answers they feel are expected of them.

Too many subtle factors affect attitudes to allow them to be easily reduced to charts. For example, a surprising finding was that Swedish pupils scored rather high on "dislike" of school. (The U.S. sample, contrary to widespread American complaint, scored on the positive, "liking school" side of the chart.) A visit to a typical suburban school near Stockholm offered a reason for this attitude on the part of Swedish students. The facilities were superb—all-carpeted classrooms, super-modern laboratories, extensive student activities and meeting rooms, the latest in cafeteria equipment. But it was also evident that the students' activities and behavior were rigidly supervised and monitored. The academic atmosphere was stiff and regimented, and it seemed hardly surprising that such a discrepancy would lead to a relative dislike for school.

In other areas, however, the question of likes and dislikes did point to enough international agreement to make the answers useful and relevant to educational planners everywhere. Fourteen-year-olds in all

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countries, regardless of class or socio-economic background, prefer humor, adventure, mysteries, sports, and romance in their reading. Upper secondary school students tend to read current events, history and travel, as well as adventure and humor. "The best students in most countries," the study found, "enjoy reading humor and comic strip in newspapers as well as folklore"—surely a blow to the more conventional, not to say stuffy, pedagogues. The report concludes:

The implications of the IEA literature study are vast. If teachers and schools can persuade students to see stories and think of them as their teachers do, the schools might not be so ineffective as some have suggested. A new look at the goals of schools and what schools *can* do could lead to a serious consideration of the curriculum in literature and mother tongue studies as a whole.

A Rational Perspective

In summary, the virtue of the IEA studies is that they shatter much of the parochialism of both the conservative and the radical critics of public education. The international comparisons provide a more rational perspective. The most vocal challengers of American public education, for example, in keeping with the prevailing mood of self-criticism make their judgments from an essentially provincial point of view. While they are entirely justified in exposing those policies and attitudes which have discriminated against the poor and against the minorities, they have tended to characterize such deficiencies as peculiarly American sins. A look at the schools of other industrialized nations—where stratification is still far more rigid—places the American achievement with all its shortcomings, in a different light.

It is precisely because the IEA study has no preconceived notion about ideas which have long become articles of faith with American public school leaders that its findings tend to be reassuring. Central to those findings are two key points: Schools *do* matter in keeping society fluid, and *more* can be *better*.



SLOWING THE CLOCK OF AGE

By Rona and Laurence Cherry

One of man's recurrent quests is for a magical "fountain of youth" that will delay or halt the process of aging. Recent scientific research, according to the authors, does not dangle the lure of eternal youth. But it does offer a fuller understanding of the biology and psychology of aging, which in turn suggests possible ways to

stave off some of the symptoms associated with advancing years.

Rona Cherry was an associate editor of *Newsweek*, and is collaborating with her brother, Laurence Cherry, on a book about aging. Their article is abridged from *The New York Times Magazine*.

Almost everywhere around the globe one finds individuals who have passed the age of 100. Many of them, of course, are withered and frail. But there are others who are vigorous and alert at an age when most of their contemporaries have long been dead. They pose a fascinating puzzle for science: How is it that this tiny group of centenarians manages to survive far longer than most other people in our society?

Part of the reason for the current U.S. interest in gerontology (the study of the aging process) and geriatrics (the study of the diseases of old age) has to do with what one sociologist calls the "truly astonishing population revolution in America." While in 1900 only four percent of the population was over 65, the proportion has risen to 10 percent today, or 21 million people. Diseases such as diphtheria or tuberculosis that once killed off many people before they passed middle age have slowly come under control; more and more people survive into their 60's and 70's. By 2005, when the generation of the postwar baby boom reaches retirement age, some experts estimate almost a quarter of the population will be 65 years and over. By the simple fact of demography, old age has become a major U.S. medical preoccupation.

Every species seems to have a fixed life-span: a single day for the May fly, about six years for a frog and about 15 for the dog. For humans, the extreme border of life probably lies somewhere not far beyond 100 years. The existence of seemingly fixed life-spans for different species suggests to most scientists that there is a biological clock ticking relentlessly in all of us from birth to death. Most human beings begin to walk and talk at relatively constant ages; they pass through puberty in their early teens, and menopause for women occurs almost uniformly between the ages of 40 and 50. Similarly, different body

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systems usually grow old in regular sequence: In the 20's ho production already begins to slow slightly; by the 30's the lung in less and less all-important oxygen and the heart sends the moving more sluggishly through the miles of bodily canals. E time a person reaches his late 40's he may already notice that his l urinary system is beginning to become more troublesome and ficient, as kidney function starts to decline markedly.

The Role of Cells

Until recently, scientists did not know what first activated the of aging. But accumulated laboratory evidence hints that the a may lie in the billions of cells that compose the body. Human with the exception of nerve, muscle, kidney and brain cells, ar stantly renewing themselves. This change occurs through the p of *mitosis*, or cell division. A cell splits, and where there was on there now are two. Along the way physical wear and tear conti destroy cells and keep their number within definite limits.

However, for years, experiments had convinced scientists that human cells, if placed in a proper kind of cell-culture environ could go on multiplying forever. Cells taken from a woman's in 1952 by Dr. George O. Gey of John Hopkins University M School, for example, have continued to flourish, producing a fa strain called the He La cells that still grow and divide in labore all over the world. Whatever the cause of aging and death, it se the cell had little connection with it.

But in the early 1960's, laboratory investigators discovered supposedly immortal cells such as those belonging to the He La had actually undergone a metamorphosis. Where normal human-cells have 46 chromosomes, the mutant cells of He La contained where from 50 to 350. Under the microscope, they had a rac altered appearance; reacted unusually to staining techniques and injected into laboratory animals produced cancerous tumors mortality, then had its cost: the transformation of normal cell malignant ones, whose development was only a grotesque parc normal growth.

Cells that remain normal seem to have a different fate. In while doing cancer research at the Wistar Institute in Philade Dr. Leonard Hayflick chanced upon a discovery: Fibroblast c kind of skin cell that is one of the main components of most boe (sues) seemed to be programmed to die. Those taken from em and aborted fetuses divided vigorously for a time, then slowed and died somewhere around the 50th division. Cells taken from adults divided about 30 times before they entered what Hayflick "Phase III"—the slow-down period immediately preceding de and those cells taken from mature adults and old people divide

about 20 times before dying. At first, Hayflick suspected something was wrong either with his procedures or his cells, but his results were duplicated by other investigators.

Interestingly, Hayflick found that although freezing the cells completely halted their biological clock, it continued to tick on inexorably when the cells were thawed. Thus, if cells were frozen at the 10th division, they would undergo the usual 40 additional doublings when unfrozen. Nothing, it seemed, could interfere very much with the program. Moreover, Hayflick found that the cell doubling limit was closely related to the life-span of a species: Cells from a mouse, which lives for three years, doubled only 12 times, while cells from a chicken, which can live up to 30 years, doubled about 25 times.

If Hayflick's limit is valid, the human biological clock is wound for no more than 110 to 120 years, the estimated time that it would take for cells to double the maximum of about 50 times. Many scientists feel that Hayflick's limit applies not only to fibroblast cells, but to most of the other cells of the body as well.

Actually, however, Hayflick points out that his limit is more a theoretical one than anything else; it is rarely, if ever, reached. Although the fibroblast cells of almost all people die after approximately 50 doublings, most human beings have the potential to live 110 to 120 years—but long before then they will have already died from disease, accident or some other assault from the environment. Why one person lives to be 100 and another only to 70 might depend, then, on differences in the severity of the environment or, most important, resistance to disease. The fact that longevity seems to run in families might be explained simply by a greater inherited invulnerability to the assaults of the environment; but it seems that almost no one is able to stave off death as long as Hayflick thinks is theoretically possible.

The Genetic Element

Even before the cells in Hayflick's culture reached Phase III, they showed signs of deterioration: They became larger, were dotted with age spots, and tended to divide slowly and in a peculiar fashion. These changes, occurring in the hundreds of thousands of cells that make up any tissue, might result in the kind of impairment we see with age. Why this happens is unclear, but it seems obvious that scientists must search for the answers in the genes, the little dabs of protein that cluster by the hundreds of thousands on every chromosome in every cell.

Little was known about how genes functioned even a few years ago; today it seems they carry the blueprints that make us physically the unique persons we are. The blueprints themselves come in the shape of long spiral molecules of deoxyribonucleic acid (DNA) that contain all the information needed to maintain a body that is constantly, like a huge city, in the process of being worn down and rebuilt.

One theory holds that aging is simply part of the genetic master plan imprinted into the cells, much the same way puberty is. "There may be a specific gene carrying a specific program for aging," says Dr. Hayflick. "Or a sequence of genes at the end of the DNA strand that says in effect: 'That's enough, let's start closing things down now.'" Some cells in the body stop functioning quite early in life; brain cells, for example, begin to die at the rate of 100,000 cells per day after the late 20's (although there is such an extravagance of brain cells that their loss seems to have little effect on intelligence); likewise, the number of taste buds per papilla of the tongue drops from an average of 295 in young adults to 88 in the elderly.

Another theory holds that the genetic program, like a completed computer tape, simply runs out, depriving cells of necessary instructions and leading to greater and greater disorganization in the body—and finally complete disintegration. According to this theory, nature is concerned only that organisms survive long enough to reproduce themselves; afterward, she loses interest in them. For example, once the Pacific salmon reaches its spawning ground and dutifully deposits its load of eggs, it passes from youthful vigor to senile weakness in a bare two weeks. A similar process may take place over several decades in human beings but still be essentially the same.

Other scientists believe that although the genetic program may continue functioning, the blueprint DNA molecules may become smudged with an accumulation of errors. The errors may result from mutation, possibly due to cosmic radiation that continually bathes the earth, or other damaging environmental factors such as pollution. "Man may live longer than most other mammals because his cells have evolved to cope with these kinds of errors," says Dr. Hayflick. "Such an evolution would account for the generally progressive lengthening of the fixed life-span from the lower to the higher animals. But it is clear that even in man this system is far from perfect."

Tampering with Genes

Until recently, most gerontologists assumed that controlling the aging process by tampering with the genes was clearly impossible. But in 1971, scientists at the National Institutes of Health were able to modify the instructions of the genes. They removed skin cells from a patient with galactosemia, a condition that prevents the body from properly digesting milk because of the lack of an important enzyme. They then took a virus called lambda phage, which can produce the enzyme, and in a delicate procedure were able to transfer the genetic information to the skin cells so they could start manufacturing it themselves. Gerontologists now talk about finding other viruses and using them to regulate the biological clock by turning on some genes and switching off others.

Other Approaches

Along with genetic approaches, scientists are investigating other causes for aging:

- **The brain.** Many gerontologists believe that the hypothalamus, a small part of the brain that acts as an overseer of all the body's endocrine glands, may be the trigger for many of the changes we see in old age. After menopause, for example, a woman's ovaries halt over 90 percent of their production of estrogens, the female hormones, and all of a woman's tissues that changed at puberty change again—this time undergoing a regression in which they lose their youthful shape and resiliency. But the ovaries themselves seem not to be at fault: If a barely functioning ovary is transplanted from an old female rat to a young one, it will resume manufacturing hormones and normal eggs that, if fertilized, can produce healthy offspring. Instead, the culprit seems to be the hypothalamus, which alters the signals it first began sending the ovaries at puberty. Dr. Joseph Meites of Michigan State University recently found that by merely stimulating the hypothalamus of an old female rat with a tiny thousandth of a volt of electricity, he was able to make the ovary resume functioning. "This is remarkable because it suggests that a large number of changes resulting from the ovary's function may actually result from changes in a very small region of the brain," says Dr. Caleb Finch, a professor of biology at the University of Southern California. "In other words, there may be pacemakers of aging in certain parts of the body that regulate the course of aging."

- **Enzyme MAO.** What first spurs this kind of brain pacemaker is unknown, but researchers have recently focused on an enzyme called Monoamine Oxidase (MAO), widely distributed throughout the body but most heavily concentrated in the central nervous system. The enzyme breaks down an important group of compounds called the biogenic amines, which are closely involved with transmission of nerve impulses and also with fluctuations in moods. After the age of 45, the levels of MAO in a person's brain shoot up dramatically and there is a corresponding decline in the amount of the amines. Some gerontologists have hypothesized that the higher levels of MAO may be what causes the hypothalamus to change its signals to the various endocrine glands under its control; the resulting changes may be much of what we call aging.

- **The immune system.** Other scientists claim we grow old in part because of increasing flaws in the body's immune system—its main line of defense against disease. As a person ages, many changes seem to warp his antibodies, which are produced by the body's specialized white cells. Either the antibodies become weak and almost useless, or else they turn against the very body they were supposed to protect. (This auto-immune reaction possibly causes arthritis.)

One way to deal with the problem has been suggested by Dr. Tak Makinodan of the National Institute of Child Health and Development in Baltimore. Makinodan injected old rats with white cells from young rats; their disease resistance shot up, and they survived what would have been lethal doses of disease bacteria. In the not too distant future he suggests, people may freeze their still-efficient white blood cells and use them later on for a disease-free old age.

The role of one of the most important parts of the immune system—the thymus gland lodged on the breast bone, was discovered recently. Then in 1963 Dr. Allan Goldstein and colleagues at the University of Texas demonstrated how thymosin, a hormone produced by the thymus, may be involved in aging. Dr. Goldstein showed that the thymosin levels drop markedly between the ages of 25 and 40. However, he also found that he was able to increase the vigor and disease resistance of lab mice—and therefore their life-spans—by giving them injections of thymosin. “We have good reason to suppose that this hormone will do the same in man,” Dr. Goldstein says.

• *Free radicals.* There is other evidence that aging is influenced by roving molecules called “free radicals,” which are formed when oxygen omnipresent throughout the body reacts with unsaturated fats. Dr. Comfort, a noted gerontologist, has compared a free radical to a convention delegate away from his wife; it’s a highly reactive chemical agent that will combine with anything that’s around.” But the radicals appear to interfere with the functions of important proteins and also form yellowish-brown age pigments called lipofuscin that clog the cells. No one is absolutely certain yet whether they disrupt cell function, but it seems quite likely that they do.

Cooling the Body

While the investigation of causes goes on, some researchers are working on pragmatic means to combat aging. Since 1917, for example, it has been known that reducing body temperature slows down the aging process. Just as refrigeration can slow the growth of bacteria that devour food, cold slows down the rate of chemical reactions in living organisms—and thereby extends their lives. “There’s no evidence that reducing human body temperature by 3.5 degrees or 5.5 degrees would interfere in any crucial way with the body function,” says Bernard Strehler, a biologist at the University of Southern California. “If this is so, by reducing body temperature, we may increase a human being’s lifespan from 25 to 40 years.”

The main obstacle to lowering a person’s body temperature is that the internal temperature of a human being is regulated by his body thermostat—the hypothalamus in the brain, “set” at 98.6 degrees. Temperature fluctuations either up or down are uncomfortable, lead at one end of the temperature range to a fever, and, at the other, to cold.

But if the body thermostat itself could be lowered, the problem might be eliminated. Some progress has been made in this direction. In 1972, neurophysiologist Robert D. Myers and co-workers at Purdue University were able to lower body temperature in monkeys about 7 degrees by inserting tiny amounts of calcium ions into the hypothalamus; none of the monkeys seemed to suffer any unfortunate reactions. While not enough time has elapsed to be positive about the results, most scientists believe that the monkeys' lives will be lengthened.

Dr. Strehler believes such a complicated procedure to be unnecessary and that we may be able to learn to lower body temperature without artificial stimuli. Australian aborigines, for example, live in a climate where blistering hot days become freezing nights. Sleeping out in the open with almost no clothing, they are able to lower their body temperatures several degrees. "They do this in part," says Strehler, "by repressing the reflex that causes shivering, which is a heat-producing reaction to cold. When they awaken, the aborigines shiver, raise their body temperatures and resume their daily routines." (Although the aborigines live no longer on the average than other Australians, one reason for this, says Strehler, might be that their medical care tends to be far inferior to that of the whites.)

The same ability could very likely be taught the rest of us through the much-publicized technique of "biofeedback." Psychologist Neal E. Miller at Rockefeller University in New York was able to teach people to control their heart rate, blood pressure and other functions, all supposedly beyond the range of voluntary control. Biofeedback can also teach older people to control their brain waves, which seem to have something to do with aging. As people age, the waves tend to slow; the dominant alpha frequency in young adults, for example, hovers between 10 to 12 cycles per second, but by age 70 has dropped to 7 or 8 cycles. Many psychologists are convinced that the alpha rhythm may be one of the body's pacemakers; its slowing in the elderly, they believe, may be partly responsible for the painfully slow movements and lengthened reaction time many old people show. A psychologist at the University of Southern California has been able to train older people to increase their brain alpha; she has found that both their movements and their responses tend to quicken.

Aging and Exercise

Other hints about how to retard the aging process come from three communities in widely separated parts of the world where longevity seems to run in whole populations: Vilcabamba, a village tucked into a lush valley in the Andes Mountains of Ecuador; Hunza, in the mountainous parts of the Pakistani Kashmir, and the region of Abkhazia in Soviet Georgia. All three places have reported that ages as high as 130 and 140 years are not uncommon.

Investigators seeking to explain these long-lived communities have found some interesting similarities between them. In all three places, there is a very high level of physical activity for older people of all ages. Even the old men and women purported to be 130 are supposed to work at least a few hours each day.

Exercise is therefore being increasingly promoted as a rejuvenator as well. Dr. Herbert A. de Vries, a physiologist at University of Southern California, found that a vigorous six-week regimen of toe-touching, jogging and swimming for one hour, three times a week, transformed a volunteer group of more than 100 men ranging in age from 52 to 87. Their hearts and lungs functioned better, the flow of oxygen through the body improved and blood pressure dropped. The men reported that they were able to work longer and better, and that their sex lives had improved. Most encouraging of all for non-athletes, the improvement seemed to have little connection with how athletic a man had been in his youth.

Diet and Hormones

Diet may also play an important role in controlling the aging process. In the 1930's, Dr. Clive M. McCay showed he could add years to the lives of rats by cutting calories in their diets. There is no conclusive evidence that human life expectancy can be greatly increased by extreme dieting. But inhabitants of Hunza, Vilcabamba and Abkhasia all have meager, low-calorie diets. In all three places, the intake of animal fats and proteins is extremely low—in Hunza less than one percent of the diet. Instead, the inhabitants mostly consume vegetables, rough grains and fruits.

Women may be able to stay younger thanks to estrogen replacement therapy (ERT), the routine administration of female hormones, to compensate for the inevitable depletion after menopause. After estrogen levels fall in middle age, women are more prone to heart attacks and to a condition called osteoporosis, which actually causes shrinkage of the bones. But with ERT, women have fewer heart attacks, osteoporosis is almost completely arrested, and even the rate of skin wrinkling seems to slow.

Much attention recently has focused on a Romanian drug called Gerovital H3, which stands at the moment in limbo between scientific skepticism and eager popular approval. A recent article by Dr. M. David MacFarlane, a professor of pharmacology at the University of Southern California, praised the drug's effectiveness in blocking MAO, the enzyme that may influence the hypothalamus and help bring on the signs of aging. According to its most enthusiastic promoters, Gerovital has the power to darken graying hair, smooth away wrinkles, cure depression and, most dramatic of all, extend life by an estimated 30 percent. But the U.S. Food and Drug Administration

(F.D.A.) refused to approve its open sale after tests in the late 1950's and early 1960's showed that its principal ingredient, procaine hydrochloride (also the main ingredient of Novocain, a local anesthetic well known to millions of dental patients), had no clear-cut effect in slowing down aging in lab animals.

A year and a half ago, Dr. Josef P. Hrachovec, then a research associate at the University of Southern California, found that Gerovital's effects were different, presumably because of small amounts of chemical buffers added by the Rumanians during the manufacture of procaine hydrochloride. Hrachovec found that Gerovital resulted in an impressive 87 percent MAO inhibition in rat brain tissues, which might be responsible for its effectiveness against aging and mental depression, which tends to be more common among older people.

In 1972, the F.D.A. authorized new long-term tests at medical centers around the country, but only for Gerovital's role as an antidepressant, not as an anti-aging drug.

Most gerontologists, after long experience with supposed aging panaceas, seem to be reserving judgment about Gerovital. Says Dr. Ruth Weg, "It might turn out to make older people feel happier and, because of that, temporarily believe themselves to be physically better. But very few scientists are prepared to say the drug can keep you young, even a little. We just don't know."

Cultural Attitudes

The war against aging is also being fought on a broader front. Psychologists and sociologists are studying the effect of culture on the physical well-being of an older person. In Hunza, Vilcabamba and Abkhasis, the aged are esteemed and almost envied for their years, which are believed to bring them wisdom. But in a youth-loving culture like the American, the old seem somehow alien, the outsiders of our society. "This," says one New York psychiatrist, "must take its toll on the average older person's mental, and then physical, well-being."

Part of the problem is that our perception of old age is fogged by a host of myths. "Most of our ideas about old people are really grotesque stereotypes forced on them by this society," says Dr. Margaret Clark, an anthropologist at Langley Porter Neuropsychiatric Institute in San Francisco who has studied aging in many cultures. "People believe them and so they become self-fulfilling prophecies. Anthropological evidence shows us it needn't be so—in many parts of the world, old people function very effectively in very active roles."

One of the most popular stereotypes Dr. Clark cites is the idea of inevitable mental deterioration in the aged. For years it was regarded as almost axiomatic that a person's I.Q. tended to rise through youth and adolescence, reached a plateau in the 30's and then, after 40, began a slow, dismal decline. New evidence, however, disputes this. Intel-

ligence is an umbrella term that covers different kinds of abilities—in some areas, such as information storage, many people even show actual improvement with age. “Where the performance of older people does tend to decline is on those tests that emphasize speed,” says Dr. Weg. “A younger person is able to respond more quickly. But if you let older people take their time, there seems to be very little decrease in performance.”

Almost any emotional change in older people is often shrugged off as a sign of senility. Dr. James Birren, Director of the National Institute of Child Health and Development’s aging program, reports that only about 12 percent of the population has a genetic predisposition for the type of brain disorders that cause senility, and only about 5 percent ever show them. Yet older people who suffer from such things as occasional memory lapses—which occur in people of all ages—are frightened by the myth of creeping senility, and fall into a vicious circle of worry, depression and physical decline.

Happiness in older people in our society, says Birren, depends on what kind of adjustment the older person can make to the assortment of myths and stereotypes all around him. Some older people passively submit to being an “old man” or “old woman”; others fight stubbornly against it. Several U.S. organizations have arisen in recent years to combat the stereotypes of old age.

One result of the activity has been a new kind of self-awareness among older people. “These organizations are beginning to have an impact on the terribly negative self-image most older people have,” says Dr. Clark. “Older people are starting to accept not only themselves, but also other older people.”

Revolution in Human Affairs

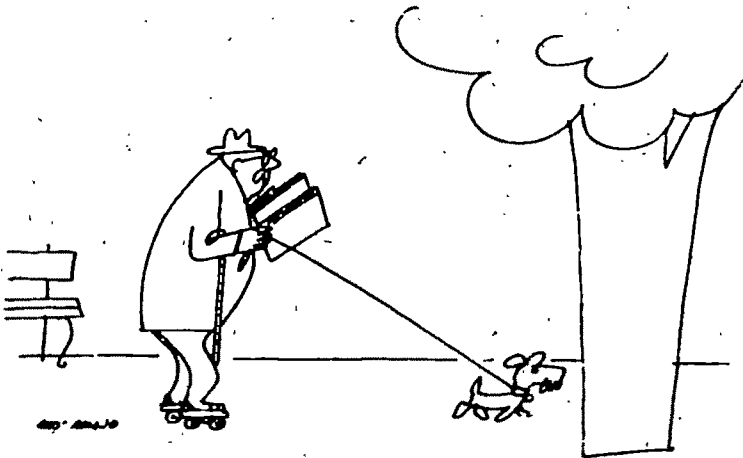
As research into aging accelerates, it seems to be matched by a growing concern among researchers about the implications of their work. Dr. Bernard Strehler admits that the eventual understanding and control of the aging process “will cause a revolution in human affairs.” Our society is geared to the basic life-span of 70 years; our social customs as well as our pension systems and insurance plans depend on it. But what if the upper ceiling of life were to be almost doubled to 120? The sudden gift of years might make second and third careers the rule rather than the exception, as well as second and third marriages.

Possibly we are treading where in fact we have no desire to go. The value of the turnover of generations was once almost unquestioningly accepted—partly, of course, because we had no choice but to accept. The theory was that nature used constant birth and constant death to endlessly reshuffle the genes, thereby creating superior versions of the human model. Cultural progress as well as biological evolution

seemed to depend on fresh minds capable of new and original insights. Now that we do appear to have a choice—or are about to have one—might we not elect to keep our life spans the way they are at present? “The science and politics of today are already dictated by what their exponents learned 40 years ago,” writes Dr. Alex Comfort. “Can we afford a 20 percent increase in the tenure of professors, senators, and company presidents?”

Strehler, however, objects to the belief that biological improvement and cultural progress are more important than the happiness of people now alive. “If enjoyment of life is a good, and the happiness of one person is worth as much as the happiness or enjoyment of any other, it seems cruel to deny people alive today a chance for more years for the sake of people who don’t even exist yet.”

Most gerontologists believe that no matter what strange permutations in our life-style are brought about by the new scientific investigations into aging, their work will be continued. “Partial control of human aging” says Dr. Comfort, “is something that’s going to happen. Unless we are slothful or overcome by disaster, it’s probably going to happen within our lifetime, and some of us will be beneficiaries. Morally, it should be beneficial. Every gain in our ability to stave off death increases our respect for life—our own and others.”



BOOK REVIEWS

ACTING IN FILM

By Leo Braudy

The reviewer is a professor of literature at Columbia University and the author of a book about the French film director Jean Renoir. He is completing a new book about different ways of looking at movies. His review is abridged from *The New York Times Book Review*.

Shooting Star: The Life and Adventures of John Wayne. By Maurice Zolotow. New York: Simon & Schuster. 416 pp.

James Dean: A Short Life. By Venable Herndon. New York: Doubleday & Co. 288 pp.

Diderot, the 18th century French writer and philosopher, argued that the paradox of acting is that an actor must be cold and tranquil in order to project emotion. Actors who play from the soul, he said, are mediocre and uneven. We are not moved by the man of violence, but by the man who possesses himself. Like Diderot, we still take most of our standards for acting from the theater. The great actor is the great impersonator, professionally adept at becoming another person and maintaining that character through as many performances as possible. Movie actors, we tend to feel, don't have craft; they have sensibility. At best, they only "play themselves."

But if now—after a decade of psycho-social analysis by Erving Goffman and R.D. Laing and of revolutionary street theater—we understand

a little more about the complexities of playing oneself, whether on stage, in films or in daily life, we should also in great part thank our experience of the American movies of the 1950's, where Marlon Brando and James Dean began their careers and John Wayne, already a star, found the master image for his screen personality. In a society that celebrated a serene uniformity of moral, political and emotional values, the movies of the 1950's allowed ambivalences to seep through and gave shape to the insecurities and fears that the outward public complacency tended to hide.

Every film of the 1950's, to be sure, can be a passport to a foreign country in one's mind that can be visited and revisited either as an act of self-anthropology or to discover the beliefs about politics and personality that once held such sway over an entire culture. Every film, every director, perhaps every actor and actress, holds some part of the secret. But there were certain names and certain faces whose talents and personal natures came together incandescently, fused by the times and their audiences into figures of more than human significance. Most of them appeared as disturbed or rebellious children—Marlon Brando, James Dean, Montgomery Clift, Marilyn Monroe, Elizabeth Taylor. One at least was a possible father-figure, John Wayne.

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The Actor and the Role

Maurice Zolotow's book on Wayne and Venable Herndon's on Dean move beyond the peripheral details of show business biography, cult or scandal to map that uncertain place where human being, dramatic character, actor and star meet. They are sensitive without being sentimental, and they celebrate Wayne and Dean with intelligence and insight.

Shooting Star especially will be a surprise for those who think of John Wayne primarily in terms of his conservative politics or as an actor who always merely plays himself. Zolotow traces Wayne's career from his early days in the lower-budget Westerns of the early 1930's to his burst into greatness with John Ford's *Stagecoach* (1939). Zolotow maintains, however, that it is only after World War II that Wayne achieved and defined the char-

John Wayne



acter by which we now know him, "the obsessed idealist." The key film for this self-transformation is Howard Hawk's *Red River* (1948), a movie that set the gruff straightforwardness of the old acting style (Wayne) against the uncertain fumbling of the new (Montgomery Clift).

Like Brando and Dean, Clift had learned his style in the most famous acting school in America, the Actor's Studio, founded in 1947 by Elia Kazan, Cheryl Crawford and Robert Lewis, and continued under Lee Strasberg. The Method, as it was called by partisans and detractors alike, emphasized an actor's inner life as the source of energy and authenticity for his characterizations, rather than the accumulation of mannerism and gesture. The Method had been created as a style of stage acting; but in retrospect it seems to have been much more influential as a style of film acting. The routine at the Actor's Studio—the individual classes, improvisations and scenes—also trained actors in the discontinuities of self. They became adept at whipping up the appropriate feeling for any scene, and this allowed them to move easily into the movies, where the order of narrative is determined by economics rather than esthetics, or where sound engineers could pick up the most inaudible anguish or a cameraman focus on the most fleeting gaiety.

Fathers and Sons

In *Red River* Wayne was the father and Clift the adoptive son, Wayne the lone entrepreneur and Clift the tentative seeker for community, Wayne the moral absolutist and Clift the relativist and compromiser. But the

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same forces that had shaped the inward acting style of Clift seem to have touched Wayne as well. As Zolotow writes,

He had, with this film, found himself, found his style, found his presence, adapted his personal tensions and emotional struggles to his technique, and he could use his feelings for his own sons, Pat and Mike, and be the son of his father, and project it into his characterization.

Wayne already had a structure of physical presence within which to develop his new personal style. His attitude toward film acting had developed through early years as an expert propman, and he still conceived of a scene in terms of the human reasonableness of its array of objects. His comfort on the screen was a comfort within a familiar space that he knows and understands.

The younger actors who played rebellious sons had more trouble. By representing and articulating the feelings of insecurity and impotent rage felt by so many in what was being billed as a secure and settled society, Brando and Dean allowed their audience a sense of release. By identifying with them, the audience discovered that it could control its own confusions. By seeing their apparent reconciliations with society (in *East of Eden*, *Rebel Without a Cause*, *On the Waterfront*) their fans could further experience the pleasures of both rebellion and reconciliation without being more than passive observers. Their talent seemed irrelevant; you were appreciating the way they made you feel (even though that could not have been done

without great talent). The feel like romantic love, where on oneself transformed in the presence of the adored object.

Acting and Self-Control

The burden on the actual beings who were these stars would have been enormous. They had opened their talent for acting and discovered that they were being shipped for something inside that seemed outside their consciousness. An actor in the older, more established style would have found it much easier to take. But both Brando and Dean already considered their acting to be the product of psychic weakness, and Brando at various times counseled both Dean and Clift to see psychiatrists. They had searched their own experience and the observation of others to create characters whose performability gave them a control over the threatening emotions within, and their audiences revealed the paradox of their consummation of a demand of despair and aimless rebellion until it became some pure form of misguiding and uncontrollable.

But with their success in achieving that tense balance came the most supportable self spawned by the clubs, the publicity and the self-protection and retreat could be the only answer. In a way the sense of self—and the acting style—was its instrument—could be summarized in the image of Brando at the end of *On the Waterfront*, his breaker zippered tightly to keep the cold and hide from view the boiling blood inside.

TALKING ABOUT WORK

By Anatole Broyard

Mr. Broyard is a staff book reviewer for *The New York Times*, where this review originally appeared.

Working. By Studs Terkel. New York: Pantheon. 589 pp.

This is the era of sentimental sociology, the apocalypse of the ordinary man. You would think some social scientists had never met one before, the way they surround him with astonishment. D.H. Lawrence once wrote that, in a certain kind of Russian novel, we are asked to feel "the coruscations in the soul of a pickpocket." The mood in the social sciences is rather like that now. When intellectuals get bored with their own pretensions, they often start apostrophizing the average man, that semi-precious stone in the rough. Beneath that anonymous exterior beats the heart of a poet. Let's get it on film or tape. "Documentation" is the darling of the new sociology.

Studs Terkel's *Working*, perhaps the most ambitious of the recent written documentaries, is an example of what I mean. For three years, the author wandered around the country with a tape recorder getting people to "talk about what they do all day and how they feel about what they do." In *Working*, we hear more than 130 people talk about their jobs, which range from emptying bedpans to running a large organization, from baby nurse to bookbinder, from professional athlete to gravedigger.

Mr. Terkel has quite a bit more going for him than the tape recorder. Even those who have not read *Division Street: America* (about Chicago) or *Hard Times* (a book of reminiscences about the 1930's economic depression) can see that he is talented writer, from the very first page of his introduction, where he says that *Working* is not only about jobs but

about a search, too, for daily meaning as well as daily bread, for recognition as well as cash, for astonishment as well as torpor; in short, for a sort of life, rather than a Monday through Friday sort of dying.

There is eloquence there, but I'm uneasy in my mind as to whether it is hortatory or objective, whether Mr. Terkel is romanticizing these people or reporting hard truths. So much depends on what he evokes from the people he talks to, and on his criteria for selection after he has gathered his material.

Bias and Truth

There is no use pretending that this is "scientific." The book is only as good as the author's bias. And he has to have a bias. It is impossible for his sympathies not to become engaged, his writer's eye and ear not to be seduced by the texture and "folk poetry" of one person's talk as against another's. Just looking at Mr. Terkel's face—rumpled by wisdom and experience—is going to put some of his people into a "philosophical" mood

in which the rueful, shoulder-shrugging "that's life" syndrome takes over.

Mr. Terkel knows all this. He never says that we ought to take his people at their word. But neither does he interpret them for us—and since we can't see or hear his informants to judge their sincerity for ourselves, how are we to take them? Between us and the truth of these people's lives are interposed all their tics: shyness, boastfulness, memories colored by time, a desire to impress or "do well," a natural tendency to talk themselves into a posture that was accidentally assumed, a need to fill an embarrassing emptiness with something, anything. Socrates said that the unexamined life was not worth living, but these people didn't think of this until Mr. Terkel came along. Examining their lives for the first time, they can't always separate the fact from the wish, the grudge, the pride or the fear.

The Literary Impulse

So one must ask not only "Are they telling the truth?" but "Do they *know* the whole truth about themselves?" To what extent is *Working* an accurate picture and to what extent is it one more instance of the intellectual's tendency to translate the ordinary American into a tragic figure trapped by fate?

I'm not reassured when Mr. Terkel says that "Dickens's people have been replaced by Beckett's." I can see him getting literary, groping for drama where there may be only dullness, taking inertia for existential anguish. People want their "being acknowledged," he writes, and I wonder: Do they, now? Aren't they just as anxious to keep out of sight, to avoid "making

waves," to pass the burden of being along with all other responsibilities? And when they say "being," what do they mean: a passive *thereness* or an active *process*?

Mr. Terkel does himself a disservice in the way he organizes *Working*. His introduction is so well written, so full of interesting metaphysical speculation, so spiced with the best snippets from the body of the text, that it raises our hopes too high. We're all ready to see the working man as a crack mechanic of ideas, his toolbox crammed with earthy aphorisms, hand-crafted ironies, pit humor and wistful reminiscence. Staring into the middle distance, a crooked grin on his face, his thumbs hooked in the pockets of his jeans, he free-associates himself into proletarian immortality.

And, in fact, Mr. Terkel's first informant just about lives up to our expectations. He is everybody's idealized average man, satirizing college boys, employers, employees and quite a few other subjects with a good-natured humor. He is too strong for self-pity, too smart for smugness. Next, we see a sexagenarian stonemason, proud of his craftsmanship, reviewing his life's work in 100 foundation walls and chimneys as he walks through his town, fantasizing an all-stone house with stone doors and kitchen cabinets, calculating his "immortality" on the basis of the durability of Bedford limestone, which deteriorates one-sixteenth of an inch every 100 years.

After these two, though, *Working* goes into a slump. I find myself listening to the reiterated gripe—"my work is meaningless"—and I feel a growing impatience with the inert souls behind it. So many workers seem

to feel that their employers owe them not only a job, a salary, insurance and a pension plan, but a philosophy of life as well. They want to know "why" they are doing what they do, and perhaps it is time every trade union had a Zen master to answer this question for them. It certainly doesn't strike me as the employer's obligation: He is lost in that very same limbo.

A Job vs. a Calling

In teaching the working man to respect himself, liberal thinkers have inadvertently taught him to despise his job. As one woman says: "I think most of us are looking for a calling, not a job. Most of us... have jobs that are too small for our spirit." Well, there are only so many callings, and if you're not in one, your best bet is to find whatever meaning you can wherever you are. Thorstein Veblen's "instinct of workmanship"—the pride of doing something well—used to give every job the quality of a calling. I won't deny that technology has sabotaged that instinct to a certain extent by giving each worker too small a part of the finished product for him to see it as a whole, but he can still take pride in himself. He is, after all, his own product too. And he can see himself as a whole.

On the credit side of *Working*, it is true that many people are never so inspired as when they are talking about the thing they know best: their jobs. Some are as lyrical as lovers; others slip into a wholly unconscious surrealism as easily as punching a

time clock. A policeman cutting down a man who has been hanging for a month says, "You're dancing to get out of the way of the maggots." Then he adds that when he tries to air some of his astonishment there, his job "sounds like a fairy tale to the guys at the bar." A racehorse jockey says, "Bones break a little casual." A prostitute explains that to feel anything for a customer is to surrender your integrity, to give him the power you should be wielding.

A piano tuner's work is a quest for the "right sound." He defies any computer to handle "the infinite number of harmonics" he has in his ear. A former sailor says he gave his youth to the sea, his old age to his wife. A woman disappointed in love exclaims that work is "gorgeous." A jazz musician loves the "unplanned" nature of improvisation. A run-of-the-mill hockey player consoles himself by calling cynicism a tool for survival and claiming that only dehumanization can produce a star.

There are relatively few surprises in these people's responses to their jobs. It is the casual or accidental humanity of their talk that lights up the book, rather than any generalizable insights into our economy or national morale. What I hear, more than I want to, is a boring and unconvincing complaint, a slapdash backlash against the old work ethic. Of course, some jobs are stultifying, but every life has its elements of choice. And how you feel about your work depends very much on how you look at it.

WHY DOES SONG SURVIVE?

By Bruce Cook

Mr. Cook is the music critic of *The New Leader* from which this review is taken. Author Henry Pleasants' article on "Bel Canto in Jazz" appeared in Vol. 7, No. 1 of *Dialogue*.

The Great American Popular Singers. By Henry Pleasants. New York: Simon and Schuster. 384 pp.

In some musical circles just mentioning the name of critic Henry Pleasants is enough to start a fight. Why should this routinely cheerful man, who comments on both classical and popular music for the *International Herald Tribune*, upset anybody? His opinions are not outrageous; he refrains from excesses, either of praise or damnation, in his calmly reasoned, crisply written reviews. He is not unqualified: With a music education at Philadelphia's Curtis Institute and well over 30 years' experience as a critic behind him, there is probably no one with better credentials working in daily journalism.

What has incensed so many music lovers is Pleasants' basic thesis—set forth and developed in *The Agony of Modern Music*, *Death of a Music?* and *Serious Music—and All That Jazz!*

In these books Pleasants argues that to remain vital, any music needs the support of a popular audience and must be fed by a living tradition. At about the end of the 19th century, he observes, classical music lost contact with the popular and folk music of Europe, which had long fed it tunes

and rhythms, and in the process also lost its audience.

American popular music (including jazz), on the other hand, has retained its tradition, and the support of its audience. It is, says Pleasants, a vital music, not moribund like the European variety. It is, moreover, a new musical idiom, a synthesis of Western and African influences that has been accomplished successfully only in the United States.

The Neglect of Melody

Given such a thesis, you can understand why Pleasants offends many people in the world of classical music. Yet jazz critics are almost equally hostile to him, since Pleasants has been no less emphatic on the need for jazz to keep its popular roots:

The bop musician's fundamental error... was neither his self-indulgent esotericism nor his incidental dependence upon virtuosity. It was his neglect of song. He disregarded the eternal and immutable factor of *memorable* melody. Nothing is so insidious in contemporary attitudes about music—and nothing so destructive—as the tendency to think of a good tune as somehow inferior, or ignominious, and to think of the man who writes one, or sings one, or plays one, as a trifle.

Pleasants has recently published *The Great American Popular Singers*, which rests firmly upon this thesis. Here, he speaks with great verve and authority on the vocal art—perhaps

not surprisingly, for his own training at Curtis was in voice, and he had a brief career as a singer before becoming the music critic of the *Philadelphia Bulletin*.

One has the sensation of discovery in reading the Introduction to *The Great American Popular Singers*—Pleasants' discovery of another facet of the world of popular music and jazz he had ignored for the first two decades or so of his career. He approaches his subject with a spirit of unreserved delight, a certain naivete that is infectious. Combined with his erudition as a musicologist, this makes for a point of view that is very fresh indeed.

Sound or Communication?

He begins by delineating the territory that the classical singer and the popular singer hold in common, ingeniously stressing similarities between pop music and primitive opera.

It should not be forgotten that Italian opera was originally a reaction against the melodic artificiality of 16th-century polyphony, an attempt to redirect vocal music toward the melodic and dramatic properties of the Italian language.

The popular singer puts the same emphasis on language, and on the effect of his presentation.

The 17th-century singers Monteverdi and Cavalli, Pleasants continues, were allowed a full range of embellishment and a freedom of phrasing that was gradually denied performers in the centuries that followed. More and more the singer came under the dual domination of the composer and the conductor. By the 19th century (and certainly now in the 20th) the voice

had become an instrument, and opera had for the most part lost the drama inherent in language when it is used for communication, not simply as sound. It is here, Pleasants concludes, in their relation to language, in their appreciation of the "text" of a song, that American popular singers come forward as reformers of a degenerated tradition, the new champions of the vocal art.

Well, maybe. But Pleasants occasionally permits himself to be swept away in his enthusiasm for American popular music in general and for certain popular singers in particular. His overall method—subjecting popular vocalists to the same sort of musicological analysis he would give to classical singers (examining Billie Holiday's vocal range, investigating Frank Sinatra's use of the *appoggiatura*)—breaks down completely when he discusses individuals like Johnny Cash or Ethel Merman, who have many vocal defects including downright faulty pitch. It is difficult to take Cash seriously as a singer when he can barely make it from one end of an octave to the other.

Cash's presence in *The Great American Popular Singers* points to a question that always lies just below the surface in Pleasants' writing, one that must be resolved if his critical theories are to be given the attention they deserve. What is the relationship between popularity and quality in any art form? Pleasants comes perilously close in *The Agony of Modern Music* and *Serious Music—and All That Jazz!* to suggesting that what is popular is therefore good—although I don't think for a minute he would ever postulate such an extreme formulation.

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The Need for Reconciliation

Still, his work does constitute an ambitious attack on esthetic elitism—on the idea that art is for the happy few—and he has convinced me that music must satisfy and be fed by popular taste if it is to survive. At the same time experience and common sense tell us that the truly good does not necessarily attract a large popular audience. Clearly, a reconciliation of some kind must be made, an equation worked out. What I'm asking from

Pleasants, I suppose, is nothing less than a definition of art.

And I certainly hope one is forthcoming. For the thesis he has developed has application far beyond the predicament of contemporary music alone. Can any art survive when it is solely a minority concern? Or to state the problem strictly in terms of music again: Are the alternatives really only the esoteric compositions of John Cage or the popular flamboyance of the Rolling Stones?



AN INSIDE LOOK AT SLAVERY

By Carl N. Degler

Carl N. Degler, professor of history at Stanford University, is the author of *Neither Black Nor White: Slavery and Race Relations in Brazil and the United States*, which won the 1972 Pulitzer Prize for history.

The Slave Community: Plantation Life in the Ante-Bellum South. By John W. Blassingame. New York: Oxford University Press. 262 pp.

Few subjects in the scholarly literature on American history have been as extensively written about as slavery. There are not only several general books on the subject, but there is at least one monograph for each of the 14 slave states. Yet the primary sources employed by historians of slavery are usually diaries, plantation records, letters and newspapers—all written by white men and women. The millions of slaves are rarely heard from, partly, perhaps, because of the unconcern of white historians but principally because of the lack of reliable sources.

The slave autobiography is a rich genre containing scores of items, but historians have been loath to use them extensively because most were written to influence public opinion during the antislavery crusade and some were written completely by or with the help of antislavery whites. In the last ten years several scholars have tried to use these sources but none of them has produced a work equal in scope,

imagination, judiciousness, and vigorous writing to this book by a young black assistant professor of history at Yale. It comes closer than any previous study to answering the question: "What was it like to be a slave?"

John Blassingame forthrightly confronts the objections leveled against the extensive use of slave narratives. (He uses 76 slave narratives supplemented with many other sources from whites and blacks, from North and South.) As he points out, all historians use personal and biased sources; the slave autobiographies can be analyzed and compensated for just as others are. The same applies to those who assert that slave writings are unrepresentative. Indeed, as Blassingame's book makes evident, slave autobiographies vary greatly in their portrayal of slavery, just as all usable historical sources do.

A Balanced View

Not merely another description of the operation and nature of the slave-plantation system, *The Slave Community* provides the fullest, most balanced view of slavery from the standpoint of the slave that is to be found anywhere in the enormous corpus of historical writing on the South's "peculiar institution." Slavery comes across here not just as a cruel labor system—though it certainly was that—but also as a human institution in which blacks lived and dealt with each other as well as with whites. Blassin-

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game sensitively portrays slave culture and life as well as the relations between slaves and their masters. His chapter on slave personalities shows that the average slave was no more a subservient "Sambo" than he was a rebellious Nat Turner, and the typical master neither a vicious Simon Legree nor a humane Robert E. Lee.

When slavery is seen from the inside in this way, it bears little resemblance to the Nazi concentration camps to which Stanley Elkins compared it some years ago in his influential book, *Slavery*. Blassingame also denies Elkins's assertion that slavery was destructive of the slave family, and he provides new evidence from the records of several thousand slave couples compiled by the Freedmen's Bureau during the Civil War. They show that more marriages were disrupted by death than by masters. In short, in Blassingame's reading, the slave family, rather than being nonexistent, was a main factor in black survival under slavery.

Another source of strength was the constructive use the slaves made of their African heritage. The author recognizes, of course, that African traits did not survive long under a slave system in which the vast majority of slaves were American-born. But in the early years, the integration of African music, religious forms, speech patterns and folk tales into the new culture was important to their survival.

Excellent as this book is in restoring balance and understanding to a complex and emotional subject, it is not without weaknesses. Chapter seven, for example, has a long excursion into

modern psychological studies of personality, but these theoretical insights are not integrated with the historical materials in any helpful way.

Sometimes, too, the author fails to exploit his sources fully. In one place, for example, he points out that slaves often looked down on poor whites, taking pride in their masters' high status. He interprets this as a sign of slave self-esteem, but it seems much more significant as an example of their taking on the class values of their masters. And when he writes that no group of American autobiographies laid "more stress... upon the importance of stable family life" than the slave narratives, he fails to tell the reader that this stress was most likely a reflection of the circumstances under which the accounts were written; for the abolitionists who often edited or oversaw the writing of these autobiographies were especially concerned to demonstrate to their readers the stability of the slave family.

Finally, in trying to counter the view that the slaves were docile, he overemphasizes the amount of overt resistance to the system, for as he recognizes in the end, the vast majority of slaves neither ran away nor rebelled. But then those two extreme forms of hostility toward slavery were everywhere and always much too dangerous to be accurate measures of the slave's true dissatisfaction with his bondage.

To write with understanding and objectivity about an institution like slavery taxes the skills of the historian as do few other subjects. No one has done the job more successfully, imaginatively and courageously than Blassingame.

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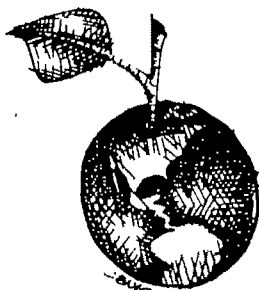


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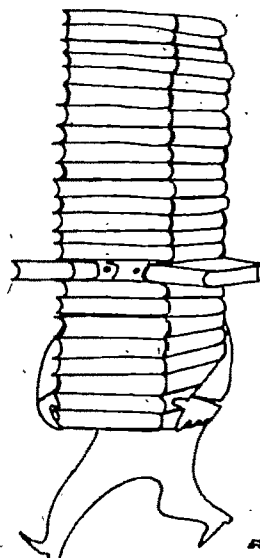
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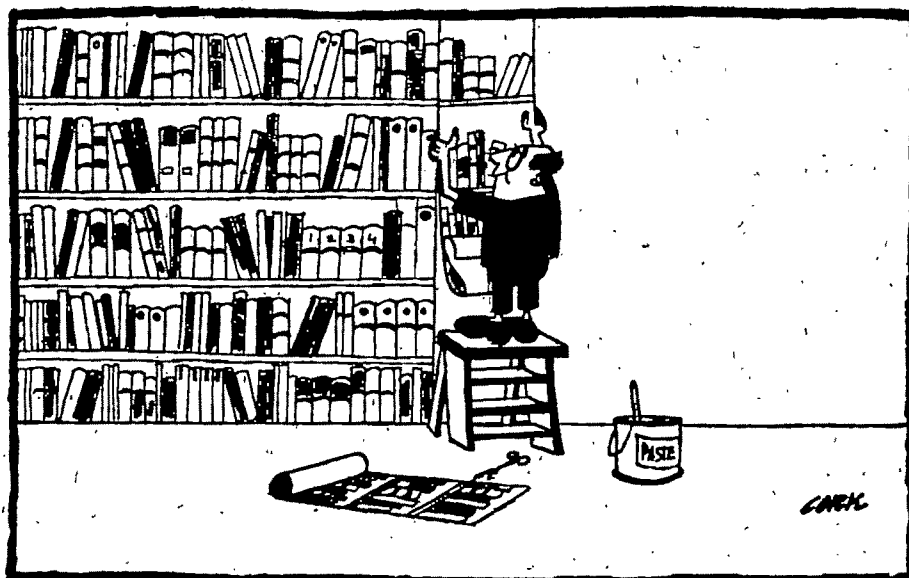
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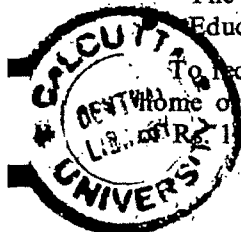
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